

THE IMPLICATIONS OF SELF-HELP GROUP APPROACH TO HOUSEHOLD FOOD SECURITY AND WOMEN'S EMPOWERMENT: THE CASE OF DEBRE-MARKOS CITY AND GOZAMIN DISTRICT OF AMHARA REGION, NORTHWEST ETHIOPIA

BY

ADANE YENEALEM WORKU

A DISSERTATION SUBMITTED TO THE CENTER FOR FOOD SECURITY AND DEVELOPMENT, COLLEGE OF DEVELOPMENT STUDIES, PRESENTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN FOOD SECURITY AND DEVELOPMENT

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DECLARATION 1: APPROVAL AND SIGNATURE PAGE

I, the undersigned, declare that this dissertation is generated by the Author under the supervision of Degefa Tolossa (Professor) and Esubalew Abate (Associate Professor). I further declare that the dissertation is an original research work and no material in this document has been previously submitted to another University or Institution for any Degree or Diploma. All the concepts, arguments, and explanations taken from secondary sources included in this dissertation are fully acknowledged and properly cited.

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DECLARATION 2: PUBLICATIONS

The dissertation is based on the following publications.

Publication 1: Determinants of food security among households' organized and not organized in self-help groups in Debre-Markos city and Gozamin district of Northwest Ethiopia. *Journal of Sustainable Development in Africa* (Volume 25, No.1, 2023). ISSN: 1520-5509.

Publication 2: Levels and Differentials in Decision-Making Power of Women Organized versus Not-Organized in Self-Help Group in Debre-Markos City and Gozamin District of Amhara Region, Northwest Ethiopia. *Ethiopian Journal of Development Research*. Vo1 44 (2).

Publication 3 (under review): Food security status of households organized and not-organized in self-help groups in Debre-Markos City and Gozamin District of Amhara Region, Northwest Ethiopia. Elsevier PB, Heliyon (under review).

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DISSERTATION APPROVAL

This is to certify that the Dissertation prepared by Adane Yenealem Worku entitled: **Implications of the Self-Help Group Approach to Household Food Security and Women Empowerment: The Case of Debre-Markos City and Gozamin District of Ethiopia,** and submitted in fulfillment of the requirements for the Degree of Doctor of Philosophy in Food Security and Development complies with the regulations of the University and meets the accepted standards with regards to originality and quality.

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Chairperson of the Center or Graduate Program Coordinator

DEDICATION

First to God! This dissertation is also dedicated to my Ex-Wife, Meseret Wasyhun Tigabu who was ambitious to see me at this level though unfortunately deceased immediately before my entrance. It is your ambition that has been encouraging me to successfully complete the program while also carrying multiple burdens such as upbringing our children. The dissertation is also dedicated to our children: Tsion, Nathanim, Nahom and Dagmawit for your understanding, patience and self-supportive courage. It is also dedicated to my parents who were with me throughout their life and at the time of this study.

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ABSTRACT

Self-Help Group Approach (SHGA) is one of the most applied instruments to individually, psychologically, socially, economically, and politically equip marginalized people. Its origin is from the West and predominantly applied in the East (Asian countries like India). SHGA mainly focuses on organizing destitute persons into small groups and facilitate regular meeting, saving, internal lending, training, exposure visits, rotational leadership and empowerment. Every human being has an inborn potential. That innate potential must be well cultivated, nurtured, and guided in the right direction through formal, non-formal, and informal education, training, coaching, and guidance. Though the SHGA is expanding in terms of geographical coverage and the size of direct beneficiaries in Ethiopia, there is inadequate research on the implications of the approach to household food security and women's decision-making power. Hence, this dissertation has studied the food security status households. Moreover, it identified the determinants of household food security, and the levels and differentials of the decision-making power of women organized and not organized in self-help groups in the study areas. For this dissertation, socio-economic, demographic, food security, and women empowerment data were collected from 492 women aged 24-49 years old. The study followed concurrent mixed approaches. Qualitative and quantitative data were collected from primary and secondary sources, had organized, analyzed, and synthesized. Relevant data analysis techniques were employed to analyze the household food security status, to identify household food security determinants and determine the levels and differentials of women's decision-making powers. The findings revealed that 25.7% and 36.1% of the self-help group members were food secure and mildly food insecure respectively. On the other hand, 16.9% and 31.7% of the respondents that were not organized in the self-help groups were food secure and mildly food insecure respectively. Similarly, the outputs of the months of adequate household food provisioning show that 42.9% of the self-help group members and 37.6% of the respondents that were not organized in the self-help groups were the least food insecure. Furthermore, the household dietary diversity score result found that 63.2% of the self-help group members and 31.3% of the respondents who were not organized in self-help groups had suitable dietary diversity. The study revealed that age, marriage, education, membership in health insurance, training on business development and harmful practices, child protection and gender equality, access to loans from self-help groups, and availability of small ruminants were statistically significantly associated with the household food security of self-help group members. Similarly, membership in health insurance, availability of electrical appliances, and ownership of ornaments were significantly associated with the food security of households who were not organized. Furthermore, women organized in self-help groups were able to attain significantly higher scores of empowerment than women who were not organized. In conclusion, households organized in self-help groups were found better in terms of food security status, levels of women's decision-making power, and ability to resist food security shocks than households that were not organized in self-help groups. The findings imply the huge potential of the self-help group approach to promote the capabilities of individuals. In the future, in-depth, comprehensive, and large-scale (i.e., regional and national) studies are suggested.

Keywords: self-help group approach/food security/decision-making/women's empowerment/sustainable development/food security determinants

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ACRONYMS

AfDB	Africa Development Bank
ASCA	Accelerated Saving and Credit Association
CLA	Cluster Level Association
CI	Confidence Interval
CoSAP	Consortium of Self-Help Group Approach Promoters
CRS	Catholic Relief Service
CSA	Central Statistical Agency
DAG	Development Assistant Group
DHS	Demographic and Health Survey
DV	Dependent Variables
ECA	United Nations Economic Commission for Africa
EDHS	Ethiopia Demographic and Health Survey
ESS	Ethiopian Statistics Service
FAO	Food and Agriculture Organization of the United Nations
FC	Facilitator for Change
FDRE	Federal Democratic Republic of Ethiopia
FGD	Focus Group Discussion
FHI	Feed the Hungry International
GE	Gender Equality
GHI	Global Hunger Index
GIS	Geographic Information System
HABP	Household Asset Building Program
HDDS	Household Dietary Diversity Score
HFIAS	Household Food Insecurity Access Scale
HTP	Harmful Traditional Practices
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IGA	Income Generating Activities
ILO	International Labor Organization
IOM	International Organization for Migration
IV	Independent Variables
KII	Key Informant Interview
KNH	Kinder NotHilfe
LL	Lower Limit
MAHFP	Months of Adequate Household Food Provisioning
MoA	Ministry of Agriculture
MSE	Micro and Small Enterprises
NGO	Non-Governmental Organization
NRR	Non-Response Rate
OCHA	Office for the Coordination of Humanitarian Affairs
ODI	Overseas Development Institute
OLS	Ordinary Least Square
OR	Odds Ratio
PSNP	Productive Safety Net Program

ROC	Receiver operating characteristic
ROSCA	Rural Saving and Credit Association
RuSACCO	Rural Saving and Credit Cooperatives
SACCO	Saving and Credit Cooperatives
SDG	Sustainable Development Goals
SE	Standard Error
SHG	Self-Help Group
SHGA	Self-Help Group Approach
SGs	Saving Groups
SPSS	Statistical Packages for Social Sciences
SSA	Sub-Sahara African
UL	Upper Limit
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USD	United States Dollar
USAID	United States of America International Development
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
VIF	Variance Inflation Factor
VSLA	Village Saving and Loan Association
WEI	Women Empowerment Index
WFP	World Food Program
WHO	World Health Organization

OPERATIONAL DEFINITIONS OF TERMS

- Educated/literate respondents refer to study participants who can read, write and compute basic arithmetic in Amharic language. This group of study participants can take notes during trainings, record their business expenditures, income and profit/loss and read the instructions, levels and sizes of sealed seeds, medicines, and food items. They read newspapers, advertisements on notice boards, vacancies and posted bids for their business.
- Elder/adults are study participants above the age of youth (above 29 years old)
- Young study participants who age ranges from 24-29 years old
- Rural residents are study participants from Gozamin district
- Uneducated/Illiterate refers to study participants who were not able to read, write and compute basic arithmetic in Amharic language
- Urban residents are study participants from Debre-Markos City

CHAPTER ONE: GENERAL INTRODUCTION

1.1. Background

This research deals with the Self-Help Group Approach (SHGA), Household Food Security and Women Empowerment. Globally, there are scientific shreds of evidence that explored the positive link between the SHGA, women empowerment, and household food security. The substantial size of reviewed studies documented a positive relationship between SHGA, women empowerment, and household food security (Biscaye *et al*. 2014; Rathinam & Akudugu, 2014; Rawat, 2014; Ranjithab, 2016; Gash, 2017; Atieno, 2017; Samishetti & Rao, 2018; Gaas, 2019). By empowering the disempowered community members, especially women, SHGA can be considered as a tool to reduce intra-household and community-level inequalities of all kinds thereby promoting the full and active engagement of poor, neglected, and destitute women in economic, social, cultural, political, and environmental issues. More importantly, a study by Gash (2017) noted that empowered women play critical roles in household food expenditure, food consumption, and food security as income generators, food purchasers, preparers, distributors, and managers.

Researchers and institutions identified inequality (Gupta & Vegeline, 2015; FAO *et al*. 2019)[1], violation of the economic, social, cultural and environmental rights of people (Castell *et al*. 2015), and lack of livelihood assets (FHI 360, 2014[2]) as the main drivers of household food insecurity. This same source noted that the growing population, escalating food prices, conflict and instability, and other factors deter household food security. It further indicated that aid dependency is crippling the motivation of the citizens to work hard towards becoming food self-sufficient. Burchi and De Muro (2012) noted that food insecurity is mainly due to lack of education, health, or other basic capabilities that constitute people's wellbeing. Overall, about 37 countries of the World would be less likely to achieve a low level of hunger by 2030[3] if the condition of inequality is not meaningfully reversed (Grebmer *et al*. 2020). These still seem

[1] As inequality and food insecurity are directly related, countries that successfully fight against inequality can improve the food security and nutrition status of their people.
[2] Human, social, financial, physical, natural and political assets are the six livelihood assets
[3] Global Hunger Index $\leq$ 9.9 (Low), 10-19.9 (moderate), 20-34.9 (serious), 35-49.9 (alarming), $\geq$ 50 (extremely alarming)

macro-level issues while food insecurity would severely be triggered by micro-level determinants.

Evans and Jakupec (2021) strongly argue that decades of development aid that developing nations have been receiving were basically to meet the vested economic, social, and political interests of the donors as much as the needs of the recipient nations. Calves (2009) added the importance of women's institutions to attain household food security. Started in 1935 in the United States (e.g., Gebre, 2015, cited Oka & Borkman, 2000; White 2000), SHGA is one of the bottom-up approaches being implemented globally. Gebre (2015) pointed out that SHGA stretched into Asia and the Southern Hemisphere including Ethiopia in the 1980s. Entz (2016) believe that the Mysore Resettlement and Development Agency and the National Bank for Agricultural and Rural Development have created fertile grounds in India in the history of the SHGA.

In a period when external aid and loans are becoming nearly norms rather than exceptions for developing countries like Ethiopia not only to drive development activities but also to meet the subsistence needs of citizens, attaining sustainable household food security through SHGA can be strange, unattainable and/or at least the most challenging task. It is also a reality in Ethiopia that there are many cash transfer and aid programs such as the Productive Safety Net Program (PSNP) and Household Asset Building Program (HABP). For example, PSNP was started in 2005 (Zerihun, 2020) to halt chronic food insecurity in Ethiopia (USAID, 2012; Birara *et al*. 2015). However, studies conducted to examine the impacts of PSNP on people's livelihoods provide mixed results. For example, Abduselam (2017), Gizachew *et al.* (2017), Zerhun (2020), and Aregash and Zerihun (2022) have found a significant contribution of PSNP on household income, asset accumulation, and household food security. Nevertheless, Asnake and Gudina (2018) reported that PSNP has minimal positive effect on women's nutrition and food security. Cochran (2016) further noted that PSNP implementation and plan show extreme divergence and biases, and corruption were widespread mainly because citizens' participation, empowerment, and decision-making in the PSNP are not strictly implemented. The same source has added that PSNP is serving as a tool to maintain the powers of the political elite in Ethiopia because of beneficiary selection and graduation problems and deliberate skip off implementing the program based on its manual. Given such inconsistencies in the implementation of the program, PSNP has

become the leading government-donor strategy for poverty reduction in Ethiopia covering about 408 (53%) districts to benefit 7.9 million rural people annually in its 5th round (2021-2025) implementation (MoA, 2020).

The Planning and Development Commission (2018) report acknowledged that the overall economic growth recorded in Ethiopia did not benefit the poorest sections of the rural and urban communities. The reasons behind this gap were mainly a lack of grassroots-level works that reach and fundamentally help the poor, marginalized, and destitute community members to ensure their households' food security through their own efforts. This is the result of aid-driven food security programs. Tariku (2018) concluded that the food insecurity status reached 32.7% at the national level. The same source has added that the number of people targeted in emergency relief assistance in Ethiopia shows an increasing trend over time, and food aid is playing a major role.

UNICEF (2023) has estimated that 31.4 million people need emergency food aid in Ethiopia mainly because of the conflict, drought, and flood. The most vulnerable population groups to food insecurity are children and women. While internally displaced persons are among the most vulnerable groups of people that are prone to severe food insecurity in the country, conflict, drought, and flood are the major reasons depending on the location of food insecure localities[4]. Moreover, UN OCHA (2023) has estimated the number of people who require humanitarian assistance in Ethiopia at around 48 million. UN OCHA (2023) has announced that only 33.5% of the total required 4 billion USD was secured to distribute cash and food items to food-insecure Ethiopians in the reporting year. Hence, though the size of the population that requires humanitarian assistance to avoid death varies from agency to agency, the figure remains high that needs reliable solutions.

While the above paragraphs provide an overall information about this dissertation focus, the development and expansion of the SHGA, the magnitude of food insecure households, the international commitments to help the food insecure households, the following section targets on elaborating the statement of the problem that necessitates this research work.

[4] https://reports.unocha.org/en/country/ethiopia/card/1THC27CGy6/

1.2. Statement of the Problem

Scientific evidences such as Debeli and Endegena (2019)[5], Achenef *et al.* (2016)[6] and Amare *et al*. (2020)[7] indicate that the rural and urban population of the East Gojjam administrative zone of the Amhara region is highly food insecure.

After decades of disappearance, and substantial differences in terms of basic principles, the SHGA was re-introduced in Ethiopia in April 2002 to address the socio-cultural, economic, environmental and political hurdles of the people of Ethiopia, especially the most vulnerable community groups such as women, through the initiatives of civil society organizations and their donors. Ethiopia has adopted this model from India – a country where SHGA is a popular approach for women empowerment and food security (CoSAP, 2017). Since 2002, the number of ultra-poor women organized in SHGs, the number and amount of business loans from their savings, and the number of new jobs created, civil society organizations adopting the SHGA into their development works, regions, zones, Woredas and Kebele covered by the SHGA and funding agencies are growing. Several assessment, research, and project evaluation findings (Aklilu, 2016; CoSAP, 2017; DAG, 2014; Gebre 2015; ODI, 2016; Tearfund, 2015) witnessed the contributions of SHGA to women's socio-economic empowerment and better livelihoods. Aklilu (2016) in his Master's Degree paper has tried to measure the contribution of the SHGA to women empowerment in Debre-Markos district. He used mixed methods research, collected survey data from 184 women organized in the SHGs and qualitative data from two cluster level associations and one federation through focus group discussions and three key informant interviewees. All data sources were from the SHG structure and experts that used to support the SHGA in Debre-Markos district. Aklilu has used frequency data and percentages to analyze quantitative and thematic sorting for qualitative data based on the research questions and objectives. He has tried to compare the empowerment levels of women as by comparing their before and after SHG empowerment levels and situations. The research findings have generally

[5] Urban Poverty and Its Determinants in Debre Markos City: A Household Level Analysis. *Journal of Poverty, Investment and Development*. An International Peer-reviewed Journal Vol (51), 2019.

[6] Level and determinants of food insecurity in East and West Gojjam zones of Amhara Region, Ethiopia: a community based comparative cross-sectional study. *BMC Public Health* (2016) 16:503. DOI 10.1186/s12889-016-3186-7

[7] Prevalence and associated factors for rural household food insecurity in selected districts of east Gojjam zone, northern Ethiopia: cross-sectional study. *BMC Public Health* (2020) 20:202. Https://doi.org/10.1186/s12889-020-8220-0

indicated high level of social and personal empowerment and improved household income and expenditure following SHG membership and as compared to the before SHG membership situation. Nevertheless, Aklilu did not touch the areas of food security and decision-making power of organized and not organized women so that the field of "Implications of the SHGA on household food security and women's decision making power" are not covered in the study area.

The current researcher is also one of the pioneering experts in Ethiopia with extended national and global experiences and training exposures in the field. From such a wide personal experience, the researcher feels both the contributions of SHGA on household income and women empowerment and the challenges to scale up and institutionalize at national level.

While scientific studies provide evidences on the implications of the SHGA to women empowerment and household food security at global, continental, and sub-continental levels, there is inadequate scientific research reports that directly address the implications of the SHGA to household food security and women empowerment in Ethiopia in general, and in the study areas in particular. Researchers such as Cochrane (2018) have noted the existence of a significant volume of research conducted on food security in Ethiopia though existing studies that touched upon the contributions of SHGA on women empowerment and household food security (e.g., Hilda *et al*. 2017) are not rigorous in their methodologies. This same study does not also specifically target the women-focused SHGA alone aiming at exploring the contribution for household food security and women empowerment. Government strategies and reports have seldom included SHGA as one of the empowerment tools that support the national food security plan and effort (Planning and Development Commission, 2021).

Furthermore, researchers such as Abda (2016), Aklilu (2016), and Hilda *et al*. (2017) indicate that regardless of the dramatic increase in the number of SHGs in Ethiopia, there is no adequate and comprehensive research on the opportunities and challenges of the approach to food security and women empowerment. This creates an evidence gap regarding the contributions of the SHGA to household food security and women empowerment as well as associated challenges in Ethiopia.

On the other hand, partly because of a lack of scientific evidence on the contributions and advantages of the SHGA and inadequate lobbying and advocacy works, there is a lack of policy

and legal recognition of the SHGA in Ethiopia. Here, it is important to recognize the difficulty of making effective evidence-based policy dialogue and lobbying with the policymakers without sufficient local and national level scientific evidence that clearly show the relationship between SHGA-household food security and other national development targets. In turn, this lack of recognition is a bottleneck for the expansion and scale up of the SHGA in Ethiopia. Without policy and legal recognition, people organized in the SHGA cannot have formal linkages with government bodies, banks, community-based organizations, donors, and private investors. This does mean that the SHGA cannot solicit financial, material, physical, technical, and human resources from development partners to pursue their vision and strategic goals. Furthermore, it is important to identify the possible limitation of the SHGA through scientific researches and recommend remedial solutions. Overall, there is inadequate scientific research that has exclusively explored the implications of the SHGA to household food security in Ethiopia and in the study area environmental, social, economic and cultural contexts.

Although there were 1673 (864 from Debre-Markos and 809 from Gozamin district) destitute women organized in 121 SHGs (62 SHGs in Debre-Markos and 59 SHGs in Gozamin district), the contributions, challenges, and future directions of these institutions and women were not studied (FC, 2021). This indicates that the implication of the SHGA to household food security and women empowerment in Ethiopia in general and in the study areas, in particular, was not sufficiently covered in the past. Due to this, it was desirable to identify the implications of the SHGA to household food security and women empowerment in Ethiopia with a particular focus on the Debre Markos City and rural Gozamin district socio-economic contexts. Therefore, research endeavors like this become necessary to explore the possible linkages that exist between SHGA and household food security. Hence, this study was conducted aiming to produce scientific evidence on the implications of the SHGA to household food security and women empowerment in Debre-Markos City and rural Gozamin District of Ethiopia.

1.3. Study Area Context

Ethiopia is the second most populous nation located in the Horn of Africa. It is bordered by Eritrea to the north and northeast, Djibouti and Somalia to the east and southeast, Sudan and South Sudan to the west and Kenya to the south (AfDB, 2021).

Amhara National Regional State is one of the regional states of Ethiopia. According to the Regional State Finance and Economic Cooperation Bureau (2021), the region has twelve zones and six regio-politan cities, one of which is Debre-Markos City. According to the Ethiopian Statistics Service (ESS, 2022) report, the population of the region is 22,876,991 (49.9% females) and East Gojjam is populated by 2,808,148 (50.5% females) people.

According to Achenef *et al*. (2016), about 59.2% of the East Gojam zone population was food insecure. Amare *et al*. (2020) further found that nearly 43.2% of the Zonal people were severely food insecure followed by low food security (31.15%). A study by Debeli and Endegena (2019) indicated that 46.8% of the people of Debre-Markos City (i.e., almost half of the population in the city) were poor who were unable to satisfy their monthly per adult equivalent consumption expenditure. While this study output shows a requirement of 34.4% additional income to escape from the poor category, this is higher than the national Household Income, Consumption and Expenditure Survey (1999-2000) that documents a requirement of 7.3% and 8% of expenditure per capita for the urban poor to reach the poverty line at national and regional levels. The poverty index obtained by this study (37.4%) was also higher than the poverty index of the national level study (2.9%) and regional level (3.2%).

This study was conducted in Debre-Markos City and Gozamin district of East Gojjam zone in Amhara National Regional State. ESS (2022) has documented that the population of Debre-Markos and Gozamin is 140,699 (50.5% female) and 162,070 (50.4% female) respectively. The study areas were selected for this study purposely because: 1) the SHGA was started in 2003 so that the study can show the impact of the SHGA program on household food security, and 2) the author has been closely supporting the SHGA in these areas so that he can benefit from his work experience to rationally link the SHGA with the household food security and women empowerment.

The former name of Debre-markos City was Menkorer which was founded[8] in 1853. Following the establishment of St. Mark Church, the name "Debre-Markos" was accorded to it. Abebaw (2017) wrote that the town is located in the North-Western part of Ethiopia 300 km from Addis Ababa. The City serves as a seat for East Gojjam Zone Administration, Debre-Markos City

[8] *https://www.bing.com/search?EID=MBHSC&form=BGGCMF&pc=W044&DPC=BG00&q=Menkorer+town+%2B+history+of+Debre-markos+town:* Retrieved on 07 Sep 2022@9:15 AM (EAT)

Municipality, and Gozamin District Administration. The same source has indicated that the areas are found at 10°17′00″ to 10°21′30″ N Latitudes and 37°42′00″ to 37°45′30″ E longitudes with an elevation (altitude) of 2350-2500 m.a.s.l. With a mean temperature of 18.5ºC/annum (15^{o}c-22^{o}c), Debre-Markos is generally characterized by favorable agro-climatic weather. The City is encircled by the Gozamin district. Debre-Markos City has 11 Kebeles. Out of these 11 Kebele administrations, the SHGA was implemented in six Kebeles.

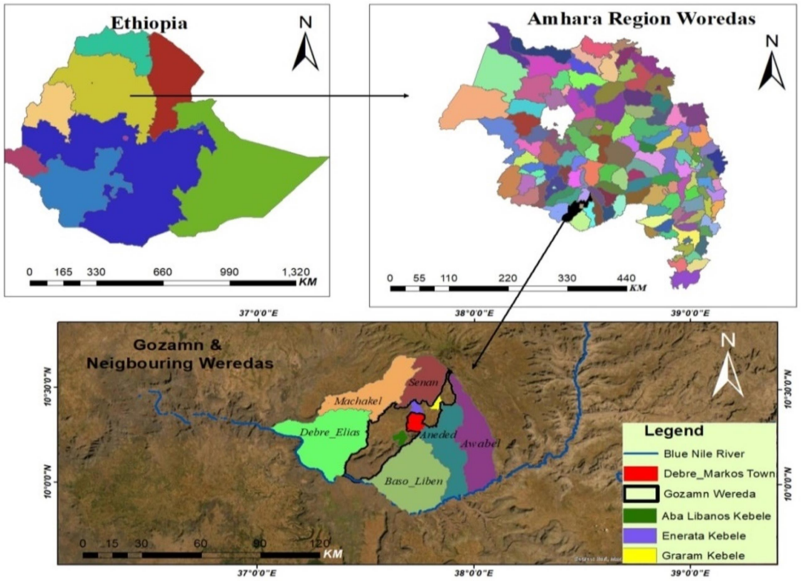


Figure 1: Map of the Study Areas

Gozamin is a rural district that circumscribes Debre-Markos City. It is bordered by Sinan, Baso Liben, Debre Elias, Machakel, Awabel, and Aneded districts and Abay River (Ethio-GIS, 2007). The district is characterized by favorable agro-climatic conditions suitable for agricultural activities. It has 22 rural and 5 urban Kebeles wherein the SHGA was implemented in the seven rural Kebeles.

1.4. Objectives and Significance of the Research

The general objective of this research was to identify the implications of the SHGA to household food security and women empowerment among the inhabitants of Debre-Markos City and the rural Gozamin district in Amhara Regional State, Northwest Ethiopia. The specific objectives of the study were to;

- Investigate the food security status of households organized in self-help groups and not organized households in Debre-Markos City and Gozamin District of Ethiopia;
- Identify the determinants of food security among households organized and not organized in self-help groups in Debre-Markos City and Gozamin District of Northwestern Ethiopia and
- Explore the levels and differentials in decision-making power of women organized versus not-Organized in Self-Help Group in Debre-Markos City and Gozamin District.

The significance of this research can be discussed in terms of the knowledge it provides, the methods of establishing different study groups, and the practices as follows.

Significance to the knowledge creation and development: The SHGA is a relatively new concept in Ethiopia. It is not yet legally recognized as an alternative women empowerment, human-centered development, and food security approach. By researching and documenting the philosophy, its theoretical foundations, and linkages with food security, the study findings could add to the existing body of knowledge regarding SHGA and its existence as an alternative household food security and women empowerment tool. Through this kind of research, future researchers, policymakers, and field practitioners have access to greater opportunities to know more about it and its contribution to household food security and empowerment. The research findings provide broader views and perspectives that prevail in the SHGA.

Significance to methodology: The research methods followed to establish the two categories of the study population provide useful lessons to researchers. The participatory rural appraisal methods and tools applied to identify those community members who were not organized in the SHGs were adopted from the tools used to establish SHGs. Hence, participatory rural appraisal is an inherent method embedded in the SHGA, which can also be used to identify the right targets for program interventions. Participatory rural appraisal tools are not new but rarely applied in research endeavors like this and program beneficiary identification. The efforts made to get relatively homogenous categories except SHG membership were beneficial in reducing confounding variables.

Significance to development and research practices: In this research, a more nuanced emphasis is given to the food security and empowerment levels of women organized and not organized in the SHGs in Ethiopia with a focus on the study area context. Women in general and those who are organized in the SHGs are the most responsible adults in their households in terms of generating incomes and preparing and rationing foods for their family members. Due to this, the significance of this research output is vivid enough to attract the attention of researchers, policymakers, and practitioners. It informs readers and program developers about the importance of proper targeting to meet the intended program outcomes: if we strive to ensure food security, it is vital to first focus on the food insecure households, and household members that have

multiple responsibilities and to make development efforts people-centered to ensure sustainability.

The research has also touched on the pro-poor development approach that Ethiopia has been implementing. The pro-poor development approaches such as micro and small enterprises development, cooperatives, and women's associations have, however, failed in terms of reaching out to the most destitute that deserves the support and positively changing their well-being. Perhaps, the SHGA is a pro-poor development approach that rightly reaches out to the most destitute community members. However, SHGA is not an aid-driven approach as it recognizes that poor people have the innate potential to support themselves if properly coached and supported. The philosophy behind SHGA disproves other economic development and financial sector theories such as "The poor are not bankable and credit worthy". The research has also brought the practices of SHGA in the study areas and its positive impacts on household food security, food security determinants, and women empowerment. In a country that is least developed, indebted, and overwhelmed by a growing number of aid-dependent citizens, SHGA can also be a relief for the government. It helps the government to prioritize its development needs and divert resources being dedicated to aid purposes to advance its investment in selected sectors. Government can focus on investments that are shared among all citizens such as basic services facilities and human capital development in the country. Hence, it can revise its practice.

1.5. Research Questions

Research questions are indicative of the focus of the research endeavor. This shapes the entire research flow and gives the clue on the dependent and independent variables of the research. The questions were framed in a way to respond to the research objectives. They were also logically clustered under the following main and sub-questions.

1- What is the food security status of respondents organized and not organized in SHGs?
   1.1. To what extent are households organized and not organized in SHGs are food secure?
   1.2. How stable is the food security status of the two groups of respondents?
   1.3. How suitable and acceptable are the food varieties of the two study groups?

2- What are the factors that determine the food security status of households organized and not organized in SHGs?
   2.1. What are the variables that determine the food security status of the two groups of households?
   2.2. Which of the food security determinants have statistically and significantly influenced the food security status of households organized and not organized in self-help groups?
3- How is the decision-making power of women in the study areas?
   3.1. What are the levels and differentials of the decision making power of women organized and not organized in SHGs?

1.6. Scope and Limitation

The scope and limitations of this particular dissertation would be defined in terms of the research objectives, food security measurements, the dimensions of women's decision-making, the meaning of SHGA, geographical location, sample size, and timeframe. To begin with, the general objective of the research was delimited to examine the implications of the SHGA to household food security and women empowerment in the study areas.

Second, while the measurements of food security are many, this research has chosen the Household Food Insecurity Access Scale (HFIAS), Household Dietary Diversity Score (HDDS), and Months of Adequate Household Food Provisioning (MAHFP) that are relevant to measure food security from access and stability dimensions. These measurements are chosen because the research scope is delimited to food security from access and stability dimensions only. Third, although the dimensions of women's decision-making are many, the study has focused on the decision-making level of women in individual and household affairs only. Fourth, the present study focused only on women SHGs. Hence, all such decisions are made considering the researcher's technical, financial and time resources (capacities) so that we extend apologies if these have created loopholes.

1.7. Research Ethics

During this research, all ethical measures were taken into consideration. Ethical permission was obtained from Addis Ababa University, College of Development Studies, before the

commencement of the study based on the approved research proposal, methods, and data collection instruments. Data collectors were professionals that were, to the minimum, Bachelor's Degree holders, well experienced in similar data collection activities and received practical training on the purpose, approach, ethical considerations, nature, and administration of the tool that was translated into the local language (i.e., Amharic) at the time of piloting. In the instruction part of the tool and during the data collectors' training, the oral consent of respondents and the possibility of any research participant skipping any question or withdrawing from the interview process anytime the participant wishes to discontinue were emphasized. Data collectors have provided participants with the freedom of seating for an interview anytime in the place and date they prefer. Consents were also obtained from each study participant as the data collection software was locked not to allow data collectors to proceed to the next interview question before getting permission from the participants. The sources of all reviewed materials are fully acknowledged and referenced.

1.8. Structure of the Dissertation

This dissertation is organized in five major chapters. The first chapter is the general introduction. It provides detailed information about the background of the research, the statement of the problem, the research objectives, the theoretical and empirical landscape, the conceptual and analytical framework, and the research methodology. Chapter two presents the research findings on the food security status of households organized and not organized in SHGs. The third chapter deals with determinants of food security among households organized and not organized in self-help groups. The fourth chapter deals with the levels and differentials in the decision-making power of women organized and not organized in self-help groups. The fifth and last chapter presents the synthesis, conclusions, and implications/recommendations.

1.9. Definitions and Concepts

The basic definition of **food security** is that of FAO (1996: 265): "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious foods which meets their dietary needs and food preferences for an active and healthy life". Later, IFPRI (2017), citing FAO (2002), defined **food security** as *a situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious foods that meet their dietary needs and food preferences for an active and healthy life*. This later definition of food security has included a ***social*** dimension in the definition of food security. This indicates that the concept of food security is evolving, flexible, and complex. Its complexity, dynamism, and evolution can be the results of the searches for the most suitable definition, measurement, and indicator for it and the persistent challenges humankind is facing to attain it. In this regard, Lofgren and Speckmann (1979) and Coates *et al*. (2007) indicated that the complexity of food security can be expressed by its height or scale (i.e., global, regional, national, household, and individual), the components it contained (such as quantity, quality, safety, cultural acceptability, and preference) and its pillars (availability, accessibility, utilization, and stability).

Based on these definitions, food-secured households and individuals are those that can feed themselves the kind of quality and sufficient foods that meet their dietary needs, which are also culturally accepted and preferred by the consumer(s) and stable at all times. Food security has four critical elements. These are 1) food availability which refers to the availability of sufficient quantities of food with the appropriate quality, supplied through domestic production or imports (including food aid), ii) food access which deals with access by individuals to an adequate set of all commodity bundles for acquiring appropriate foods for a nutritious diet, iii) utilization refers to the utilization of food through adequate diet, clean water, sanitation and healthcare to reach a state of nutritional well-being where all physiological needs are met, and iv) food stability that refers to the availability and access dimensions of food security. Hence, a food-secured individual has a sufficient quantity of food that contains the most appropriate quality from own source or imports including aid. It also means that a person must have the means to have physical access to the food she/he needs to get a nutritious diet and psychological, social, and cultural backgrounds to the accessible food so that she/he can comfortably utilize it. This sufficient

quantity, quality, and socio-culturally and psychologically suitable food bundle must be accessible for the individuals for a reasonably longer period (or remain stable). At this point, it is important to remember that there is individual difference among household members so that food security can best be measured at individual level and/or household heads, especially women must be excellent food distributors among the household members based on their health, preferences and dietary needs.

The definition requires households and individuals to have the capacity to produce and/or power to purchase or exchange the food items they want from global, national, or local stocks and markets. While these would lead to the concept of food self-sufficiency[9], households and individuals would also apply different coping strategies such as remittance and borrowing in times of food shortage, and/or governments can consider packages such as subsidy and food rationing as complementary food security measures.

On the other hand, **food insecurity** can be defined as the situation where individuals in a society have neither the physical nor the economic capability to nourish themselves (Degefa, 2006). Other researchers such as Coates *et al*. (2007) put food [in] security as a continuum so that households and individuals can rather be in the "food secure, mildly food insecure, moderately food insecure, and severely food insecure" continuum or "food secure, vulnerable to becoming food insecure, or food insecure as represented by hidden hunger or chronic hunger, acute hunger or starvation" continuum (Hendriks, 2015). Macro, meso, and micro level factors force food security/insecurity to have a continuum shape so that households and individuals would move from one situation to another depending on their specific contexts or situations.

Another concept that deserves attention here is **famine**. Degefa (2006), after considering the definitions given by those affected by famine itself (in-siders) and technocrats who tried to define famine (outsiders), has operationally defined famine as the food shortage due to insufficient production or lack of cash to purchase foods and the resulting hunger that affects the lives of individuals, households, and regions.

[9] Households that are independent financially, able to pay their bills, and working to support themselves are called food self-sufficient. On a larger scale, it can also apply to nations or regions that are capable of producing enough stable food crops domestically and able to feed their people without buying, importing, or borrowing.

Sustainable livelihood is another concept high on the global agenda (Srinivas, 2021). It is also one of the commonly used approaches in food security and development studies. Given other definitions (Scoones, 2009; Valdés-Rodríguez & Pérez-Vázquez, 2011), an operational definition for sustainable livelihoods would be the definition of Chambers and Conway (1991:6):

> A livelihood comprises the capabilities, assets (stores, resources, claims, and access) and activities required for a means of living. Livelihood is sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long-term.

Empowerment is a growing economic, social, and spiritual capability of individuals and communities (Ghanghas, 2018). For Mandal (2013), empowerment, which has replaced the term 'development' in the present-day discourse, is an effort being made to expand the basis of one's power. Calves (2009) noted empowerment as a power transformation between individuals and social groups which can happen through challenging current ideologies that justify inequalities, changing the means of access and control of economic, natural, and intellectual resources, and transforming structures and institutions that reinforce and preserve existing power systems. Mokta (2014) classified women's empowerment into cognitive, psychological, economic, political, and physical dimensions. As Mandal (2013) elaborated, the declaration of the 'Women's Decade' in 1975 opened a more collaborative effort for women's empowerment among experts, Universities, national and international platforms, and governments. Hence, it is important to note that women's empowerment is not only to address the felt and experienced deprivations of women but also to unarguably fulfill, protect, and promote the indivisible human rights elements across the globe, nations, regions, and localities notwithstanding to individual differences and social, economic, political, and cultural variability.

Self-help group is defined differently by different writers, scholars and nations. Citing the Fourth European Expert Meeting on SHG held in Brugge, Belgium (1997), Atieno (2017: 21-22) quoted the Swedish definition of SHG as "--- a small participant-controlled group of people who meet regularly to analyze joint problems by providing mutual support and help". This same report has further noted that "self-help is non-professional and SHGs are voluntary, small group structures formed by peers who have come together for mutual assistance in satisfying a common

need, overcoming a common handicap, of life disputing problem and bring about a desired social or personal change". Rathinam and Akudugu (2014: 195) have operationally defined self-help as "a group of people with common interests coming together to work to improve their living conditions".

SHGA is inclusive in terms of dealing with psychological, sociological, economic, environmental, political, human rights, and other issues. By way of doing this, it is also demonstrating its inclusiveness in terms of addressing the problems of all sorts of women, men, and children (girls and boys), people with disabilities, rich, and poor, white, and black, other classes of people living in developed and developing countries. In addition, it grows vertically because it attempts to address the problems of individuals, households, communities, nations, and beyond. The basic structures, features, principles, and functions of the SHGA can be summarized in Table 1.

Table 1: Structures, features and functions of the SHGA

Sources	**Structures**	**Features**	**Principles**	**Functions**
Ranjithab (2016)	▪ 10-20 members	▪ Women, men or mixed group ▪ Adult and/or youth or mixed ▪ Self-financed with certain government subsidy ▪ Linked with banks for external loan ▪ Manageable size	▪ Self-governed ▪ Saving and credit as primary economic activity ▪ Economically homogenous voluntary	▪ Poverty reduction ▪ Women empowerment ▪ Closely works with government and non-governmental organizations and banks
Karimzadeh *et al*. (2011)	▪ 15-20 homogenous poor individuals	▪ Regular meeting ▪ Regular saving ▪ Internal loan ▪ Manageable size	▪ Flexible profit management (dividend, interest or	▪ Poverty reduction ▪ Women empowerment

Sources	Structures	Features	Principles	Functions
		▪ Self-financed ▪ Strong affinity ▪ Rotating leadership ▪ Internal bylaw ▪ Group members are mainly women	capitalization) ▪ Active participation ▪ Non-partisan	and gender equality
Das (2016)	▪ Average of 15 members ▪ Mainly women	▪ Affinity groups ▪ Informal ▪ Homogenous ▪ Regular saving ▪ Internal lending	▪	▪ Women empowerment ▪ Poverty reduction
Rathinam and Akudugu (2014)	▪ 15-20 homogenous persons ▪ Executive committee, secretary and members	▪ Social cohesion ▪ Regular saving ▪ Internal lending ▪ Penalize those who violet the bylaw ▪ Group accounts ▪ Peer monitoring	▪ Internal bylaw ▪ Rotational leadership ▪ One member from a family ▪ Only a member of one SHG ▪ Mutual trust	▪ Tool for sustainable rural development and women empowerment
KNH (2014)	▪ 15-20 members ▪ Three levels: SHG-CLA-Federation	▪ Institution building, federation as a legal representative of the SHGA	▪ Mutual trust ▪ Affinity ▪ Focuses on social, economic and political empowerment ▪ Self-financed, independent	▪ Three levels playing different roles ▪ SHG focuses on improving the psychological, social, economic, political and

Sources	Structures	Features	Principles	Functions
				overall situations of the members
Biscaye *et al*. (2014)	▪ Three types of SHGs o Saving Groups (10-20) o Health group (not specified) o Farmers group (12-24)	▪ Self-help can be Saving Groups, health and farmers groups (wider scope)	▪ Voluntary	▪ Formed their groups to solve their shared problems

There are also researchers (such as Seibel, 2001; Karimzadeh *et al*. 2011; Sundaram, 2012; Ranjithab, 2016; Das, 2016; Atieno, 2017) who associate SHGA with group-based microfinance institutions that start with saving and run self-managed credit options. Nevertheless, SHGA is a democratic institution of the poorest sections of the community, especially women that are generally established to address members' and communities' existing and emerging individual, social, economic, political, and environmental issues (Seibel, 2001; Biscaye *et al*. 2014). Therefore, saving and credit service to members is just one of the multiple roles of the SHGA, one of the most important tasks during the initial periods of the SHGs. More importantly, cluster-level associations and federations do not engage in such economic activities.

Development can be defined from economic growth perspectives like poverty reduction or people-centered, participatory, and bottom-up development that stimulates the social, economic, cultural, and political lives of the grassroots community members thereby determining their destination (Schafer *et al*. 2011). According to UN (1986), all human beings have the right to development and everyone has the right to participate in, contribute to and enjoy the economic, social, cultural, and political development outcomes. The definition given by the UN to people-centered development emphasizes on grassroots development through the active participation and involvement of the local people.

Todaro and Smith (2015) have further denounced the linear definition of development in economic growth indicators such as per capita income and assert that development encompasses social, cultural, political, economic, and psychological advancements.

In summary, it can be said that the concept of development has been evolving for a long period of time and it is understood differently by different writers based on the implicit values[10] they attach to their definitions, the context in which it is defined, and time. Also, it is sometimes linked with political orientations and tends to govern the relationship between and among actors. Hence, different definitions of development offer different sets of ideas (Shareia, 2015) that shape the realities on the ground and power relations at all levels. This resembles the definition of development with an ongoing discourse among scholars and actors that have different value systems (such as material, cultural, and spiritual).

1.10. The Historical Accounts of the SHGA

The origin of the "self-help" traces back to the history of humanistic psychology. The first phase of humanistic psychology is believed to extend up to the 1980s (Warmoth *et al.* 2001). Maslow (1954: 13), one of the pioneer humanistic psychologists, has noted that:

> --- if we can give up the dream of permanent and uninterrupted happiness if we can accept the fact that we will be only transiently ecstatic and then inevitably discontented and grumbling for more, then we may be able to teach the general population what self-actualizing people do automatically, i.e., to be able to count their blessings, to be grateful for them, and to avoid the traps of making either/or choices.

Oka and Borkman (2000), as cited by Gebre (2015), have highlighted that the **Alcoholics Anonymous** self-help group that was established in 1935 in the United States of America was the first globally recognized SHG. The same source has further noted that other affected community members such as persons with disabilities, war victims, and children experienced abuses established their own SHGs to solve the problems of individual members that are commonly shared through collective actions.

In terms of time, the 1920s-1980s were periods when SHGA was advanced and mushroomed. In the 1980s, Ethiopia had adapted the concepts and principles of SHGA to initiate and advance the participation and benefits of the poor community groups in the name of *Ras Agez* (which means self-help) (Gebre, 2015). The then self-groups were composed of poor women and men (mixed group) and the government used to provide land and working capital while the group members were responsible for contributing their labor, knowledge, and skill to improve their situations.

[10] Some of the implicit values attached to the definition of development include what to improve, how to improve it, and the question of who decides. Or else, what policy objectives and outcome indicators are included in the definition?

Hence, the SHGA has been evolving conceptually (i.e. from a group of persons with mental health problems (Biscaye *et al*. 2014) to a rights-based bottom-up development approach (UN, 1993; KNH, 2014; Gebre, 2015; Global Citizenship Commission, 2016) since the 1980s.

Sectorial expansion was also observed as the purpose of the SHGA is to address personal problems of the group members that could be psychological, social, economic, and political.

Geographically, the SHGA was expanded to the South following the formation of Grameen Bank in Bangladesh, India (because of the measures taken by Mysore Resettlement and Development Agency and the National Bank for Agricultural and Rural Development) in the 1960s-1980s (Gebre, 2015; Entz, 2016). In 2002, it was reintroduced into Ethiopia through the civil society organizations from India.

Since its introduction in 2002, the SHGA has been geographically expanding to all national regional states and the city administrations of Ethiopia except Tigray. By the end of 2022, 33 non-governmental organizations and their consortium organization had organized about 276,512 of the most destitute women into 15, 171 SHGs (CoSAP, 2017). According to CSA (2016), this means that about 1.3 million people are benefiting from the SHGA in Ethiopia. These women were able to accumulate about 262 million Birr capital from their savings and business activities and created self-managed credit services for their members (CoSAP, 2022).

Furthermore, the number of women organized in the SHGs in Debre-Markos City since 2003 and in Gozamin District since 2012 is about 1673 (FC, 2021) (Table 2).

Table 2: Statistical data on the number of SHGs and Organized Women in the study areas

City/District	Kebeles	SHGs	Organized women
Debre-Markos City	8	62	864
Gozamin District	7	59	809
Total households	15	121	1673

Source: *FC (2021)*

This data represents 864 urban and 809 rural households. Multiplied by an average household size of 4.6 (CSA & WFP, 2019), about 7, 696 destitute persons in the study area benefit from the approach. Sporadic evidences show that SHGA helps members access credits from their savings, help them invest in business activities and improve their household income, accumulate assets,

and improve household nutrition, health, and children's education (Lawson-McDowall *et al*. 2016). Weingärtner and Pichon (2017) have found that the SHGA has empowered Ethiopian women. In conclusion, as ODI (2016) and Gebre (2015) believe, SHGA is everywhere in the World and in many parts of Ethiopia.

1.11. Theoretical Review

Theories of food security are many and evolving. One of the first **theories is Malthus'** (1798) essay on population, which is derived from the food availability theory. The essay states that the population (which grows geometrically) and agricultural production growth rate (that is arithmetical) ultimately lead to the imbalance between the demand for food and food supply.

The other food security **theory goes to Sen's** (1986) food, economics, and entitlements theory. This theory stresses entitlement failure, not the problem of producing smaller amounts of food per head at global, regional, national, or local levels that lead to famine, food insecurity, and hunger. For him, the failure in endowment (such as land and labor due to various reasons) and/or exchange entitlement (such as unemployment, low wages, high food prices, and drop in the prices of goods/services one sells) leads to the inability of the person to acquire enough food. Burchi & De Muro (2012)[11] on the other hand, stressed the importance of the capability of a person to either produce or purchase the food one requires. This capability is mainly vested in the person's education, training, good health, and other basic capabilities that form his/her well-being, agency, and freedom. This theory leads to the importance of investing in citizens' knowledge, attitude, and skill development at early times as well as the importance of good quality and sufficient food for the fullest possible development of human beings.

Development theory, on the other hand, deals with the how of development. Development theories are scientifically accepted general development principles that are followed as the basis of actions. Development theories are the sets of proposed principles, models, and strategies that need to be applied as drivers to a pre-defined development goal (Shareia, 2015). The key development theories considered in this particular dissertation are summarized in Appendix 8.

Sustainable livelihood is another theory high on the global agenda (Srinivas, 2021). It is also one of the commonly used theories in food security and development studies. It stresses that a

[11] United Nations Development Program, regional bureau for Africa. Working paper, 2012-009: February 2012

household needs to have tangible and intangible assets to ensure the food security of its members[12]. Given other definitions (Scoones, 2009; Valdés-Rodríguez & Pérez-Vázquez, 2011), an operational definition for sustainable livelihoods would be the definition of Chambers and Conway (1991:6):

> A livelihood comprises the capabilities, assets (stores, resources, claims, and access) and activities required for a means of living. Livelihood is sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long-term.

Other writers such as Serrat (2010), Adato and Meinzen-Dick (2002), and Srinivas (2021) also believe that livelihoods require the capabilities of persons, asset bases and activities and that livelihood diversification is the effort of individuals and families. While Adato and Meinzen-Dick (2002) have listed human, social, financial, natural, and physical livelihood assets, FHI 360 (2014) has included political asset as the sixth component.

The theory of the self-help group approach emphasizes on the naturally given potential of all human beings. Its theoretical background is associated with humanistic psychology (Warmoth *et al.* 2001). Humanistic psychologists struggle and believe that individuals have an inherent drive towards self-actualization: the process of comprehending and expressing one's competencies and motivations. The philosophy believes that all people are inherently good; individuals and groups can be assisted to be self-aware and mindful thereby changing their state of mind and behavior from a set of reactions to a healthier and productive self-awareness and thoughtful actions through especially positive social support mechanisms. It believes in democratic principles for human existence thereby affirming the freedom of individuals to choose recognizing their human potential. According to D'Mello (2017), humanistic psychology believes that human beings supersede the sum of their parts, have their existence in a uniquely human context, are aware of their being (conscious), can make choices, and therefore, have responsibilities and are intentional, aim at goals, are aware that they cause future events and seek meaning, value and creativity. Bland and DeRobertis (2019: 17)) have cemented this by saying that humanistic psychology views a person as "continually evolving and uniquely situated in a socio-cultural and

[12] Burchi & De Muro (2012) enlisted natural capital, physical capital, human capital, financial capital, and social capital as the critical asset bases of a food-secured household

eco-psycho-spiritual context. --- Optimally functioning people are consciously aware, responsibly free to make choices by their values, goal-oriented, meaning-making, and creative about their experience".

By exploring and focusing on the positive and strong sides and ignoring the sick parts that probably exist in every person, humanistic psychology believes that a person can help the self if her/his thinking is reoriented positively. For this reorientation, a trained therapist who unconditionally accepts the person in a problematic or vulnerable situation is a necessary vehicle for change (Bland & DeRobertis, 2019). Maslow (1954, cited in Cantril, 1955), one of the leading founders of humanistic psychology (Warmoth *et al.,* 2001: 10) boldly put that:

> Medicine, physics, law, economics, education, engineering, business, industry, --- all are powerful means, not ends. Their ultimate end is human fulfillment, human betterment, growth, and happiness. These tools are good and desirable only in the hands of good persons and evil in the hands of evils. The only way to heal evil persons is to create good persons, to understand people better, know what creates them, know how to cure the evil, and let the good come out.

Other writers (Rowan, 2005; Bland & DeRobertis, 2019) reaffirm that everyone underneath is 'ok', the emphasis shall be on the 'whole' person (i.e., body, feelings, intellect, soul, and spirit), is in the process of change and has an achievement motivation for change, believes that the first-order (symptom reduction) change can never bring a lasting solution to a problem so much so that the second-order (transformative) change must be the focus to uproot the root causes of a problem a person has experienced. Hence, the basic concept of the SHGA is to psychologically empower individuals through the assigned facilitators, coaches and supervisors so that they can make use of their aptitudes to help themselves and their dependents.

The **basic needs** (such as material needs like food and shelter and non-material) approach is another theory of food security that considers economic and non-economic variables such as employment/unemployment.

Finally, **the income-based food security theory**, one of the oldest, is heavily engaged in calculating the household income/expenditure, converting income/expenditure to food, then from food into calories through equivalence tables and from calorie availability to food security or insecurity depending on the threshold (Burchi & De Muro, 2012).

1.12. Review of Related Literatures

Food insecurity trends are promising at global level. According to Welthungerhilfe and Concern Worldwide (2020) global hunger index report, World nations, on average, stand up at 18.2 in 2020 from its 28.2 in 2000. While Africa South of the Sahara (27.8) and South Asia (26) score above the average, the remaining ones (i.e., West Asia and North Africa, East and South-East Asia, Latin America and the Caribbean and Europe and Central Asia) score below average in the 2020 GHI report. The report further noted that, unless the situation is turned otherwise, about 37 World nations are unlikely to achieve low hunger position by 2030.

The SHGA is an alternative food security, gender equality and empowerment approach. Pattenden (2010) wrote that SHG was rapidly expanded in India simply because it was recognized as a poverty reduction tool by specifically targeting the hardcore poor and has become a policy recommendation in the fight against poverty, gender equality, and women empowerment.

According to KNH (2014) and Gaas (2019), SHGA has three triers: SHGs (15-20 persons), Cluster Level Associations (8-10 SHGs) and Federations (8-10 CLAs) of SHGs. They have elaborated that while SHG is the base structure in the SHGA that primarily works to improve the psychological, social, economic, political, and overall situations of members; the Cluster Level Associations (CLAs) are a middle-level structure that bridges between the SHGs, the wider community and the Federation. The federation represents the SHGA and works with the government and other highest-level actors focusing on human rights, peace, stability, good governance, accountability, policy advocacy, and democratization processes.

Biscaye *et al*. (2014) have nuanced that SHGs are multiple in character and function. In particular, the three types of self-help include 1) Savings Groups that constitute 10-20 individuals (that include SHGs, Rural Saving and Credit Association (ROSCA), ASCA, and VSLA) that are established to serve multiple purposes, 2) health groups formed by particularly women of reproductive ages or pregnant women to promote knowledge on maternal and community health issues among the members thereby mobilize community response (usually time-bound that lasts up to 3 years) and 3) farmers' groups consisting 12-24 mixed (women and men) members. For them, all these can be classified as SHGs because their respective group

members come together to solve their common problems through collective actions and resource mobilizations.

1.13. Empirical Reviews

Evidence on food security/insecurity

Although food security is at the top of the global agenda, it has become more imperative for Africa, especially for the Sub-Saharan African region (Dagnaygebaw, 2019; Degefa, 2001). A government report (CSA & WFP 2019) has declared that Ethiopia is characterized by a young population of around 114 million people, second to Nigeria. Approximately 20.5% of households were estimated to be food insecure in 2016. This same report has noted that the proportion of households who have inadequate caloric consumption (< 2,550 Kcals per adult equivalent per day) constitutes 31% of the total households in Ethiopia (24% in urban and 33% in rural areas). The report asserts that approximately 54% of households consume four or fewer food groups and 18% three or fewer food groups and on average, meat and fruit groups are consumed less than one day a week and nearly one in four households (23%) had inadequate food consumption during the seven days before the interview date. Action against Hunger (2020) revealed that only about 43% of Ethiopians were food secure between Jan-June 2021. Devereux and Sussex (2000:1) have written that food insecurity in Ethiopia remained structural at least since the 1980s and quoted the then vice-Minister of the Ministry of Development and Cooperation of the Government of Ethiopia, Mr. Mekonnen Manyazewal, as saying:

> Perhaps the greatest challenge that the country faces is that of ensuring food security. This is so because of the low technological base of agriculture, limited rural infrastructure, and off-farm employment compounded by neglect and inappropriate policies over many years.

Other sources (Birara *et al*. 2015; Abduselam, 2017; Cochrane, 2018; Dagnaygebaw, 2019; OCHA, 2022) have documented that food insecurity in Ethiopia remains rampant and severe and Ethiopia has been a net food importer for decades. Shreds of evidence uniformly show the increasing trend, at least in the number of people affected, in the food insecurity situation in Ethiopia. The differences among sources would be on the magnitude of the people affected and the reasons for food insecurity. For instance, these reviewed materials show that the proportion of food-insecure people in Ethiopia ranges from about 10% - 23% of the entire population.

In an overview of the humanitarian response in Ethiopia, OCHA (2024)[13] estimated the number of Ethiopians who need humanitarian assistance to 28.6 million. The reasons for food insecurity in Ethiopia are a mix of complementary natural and human-made factors[14]. Among the food insecurity factors identified, it is important to focus on certain strategic ones such as inequality as some others would be symptoms of the problems. The reviewed materials widely documented inequality as the food insecurity variable. Because of inequality, food insecurity is not experienced in the same way across individuals, households, and communities, at the same times or by the same people, nor do all individuals benefit from potential gains. Place of residence is also identified as one of the factors where some (Dagnaygebaw, 2019) argue that the magnitude and severity of food insecurity in rural communities is higher than in urban communities due to outdated agriculture and generalized development models. Others (like Wondim *et al*. 2022) argue that households with off-farm and diversified income sources, wherever they live, are better food secure than households who depend on single/limited income sources.

Based on the reviewed materials, it is learned that the food insecurity situation in Ethiopia seems worsening from time to time and sometimes becoming beyond the response capacity of the government and its partners. Many food insecurity factors are outlined by reporters. Considering our current context, our food insecurity can be further exacerbated by the instabilities and hostilities that continually displace millions of people from their homesteads; destroy livelihood sources and socio-economic infrastructures, deter socio-economic activities, affect market rules, and challenge humanitarian access to the people affected. Children are reported as the most affected by malnourishment and disease outbreaks.

The self-help group approach and household food security

i. Global evidences

Globally, there are scientific shreds of evidence that show the significance of the SHGA for the psychological, social, cultural, economic, household decision-making, and political empowerment of the excluded community members (Borkman, 1976; Sundaram; 2012; Biscaye

[13] OCHA (2024). https://www.unocha.org/ethiopia

[14] Factors of food insecurity in Ethiopia include rapid population growth, low per capita income, production fluctuation, low none farm employment, inappropriate policies, weak effort, market fragmentation, low level of farm technology, illiteracy, and low-quality basic education, poor health and sanitation, poor governance, underdeveloped water resources, land degradation, low economic development, weak institutions, drought, human and livestock disease and conflicts

et al. 2014; Rathinam & Akudugu, 2014; Sail & Kumbharjuvenkar, 2013; Ranjithab, 2016; Atieno, 2017; Kumar *et al*. 2018; Gaas, 2019; Das, 2016) thereby to their household food security. Specifically, organizing poor women in SHGA has significant prominence on gender equality, emancipating women from cultural and traditional beliefs that disproportionately drag, harm and disempower them, women's asset acquisition, investment in children's education and health, domestic saving and investment, better primary and reproductive healthcare seeking behaviors among women of reproductive age, agricultural productivity, women's decision-making, improved household living condition, subjective well-being and autonomy (Seibel, 2001; Swamy & Tulasimala, 2010; Rawat, 2014; Shirisha *et al*. 2017; Atieno, 2017). As Sail and Kumbharjuvenkar (2013) and Ranjithab (2016) wrote, SHGA has disproved the old notion that the poor are not bankable and credit-worthy because of its empowerment capacity. Furthermore, Atieno (2017) pronounces that gender equality has immensely contributed to poverty reduction all over the World, and argues that SHGA promotes gender equality and women empowerment thereby contributing to poverty reduction efforts.

The SHGA has become an important vehicle in the development processes. As Seibel (2001), SHGA has quick and encouraging effects on the lives of individuals, households, and the society at large. Apart from their saving and internal lending systems, SHG-Bank linkage has not only boosted the microfinance services outreach down to ultra-poor community members but also has enhanced the financial inclusion of the poor. The better-off poor were taking the advantages of formal microfinance institutions more than the ultra-poor (Swamy & Tulasimala, 2013) though there are arguments.

The SHGA in particular focuses on women's empowerment. When women get access to education and training opportunities, they start and expand their entrepreneurship activities and further explain that "There is a positive relationship between the socio-economic conditions of the women, women empowerment and economic development" (Samishetti & Rao, 2018: 625). Furthermore, Rawat (2014) has found that membership and participation in SHGs have immensely contributed to the social empowerment and well-being of its members as measured by their level of self-confidence, communication skills, decision-making capabilities, access to medical services, water supply and sanitation facilities, literacy level and being free from domestic violence. Rawat has further noted that SHGA has helped its members to improve their

household income by 100% and their expenditure structures by 178%. The writer concluded that among the various schemes initiated and promoted to generate gainful self-employment opportunities, the SHGA was found more effective than others with relatively low investment costs. On top of this, Das (2016) has found that the mean income of households was statistically significantly higher (*p=.01)* after they joined the SHGs than their mean income before joining the SHGs.

Other studies (such as Karimzadeh *et al*. 2011; Das, 2016) have indicated that, by holistically empowering the most destitute, neglected, and impoverished women, SHGA contributes not only to business initiation and expansion thereby self-employment creation but also to an improved household income, women's access and control over household resources thereby to improved household food security, children's education and well-being of the family.

ii. African continent and Sub-Saharan Region evidences

Being the second largest and most populous continent in the World, Africa still suffers from chronic poverty and food insecurity. Its food self-sufficiency has declined between 1961 and 2007. Africa South of Sahara is one of the regions where hunger is highest in the World with 27.8. The major reason is the broader inequalities among citizens. Targeting disadvantaged and marginalized groups provides better performance in terms of food security in Africa and the Sub-Saharan region (Welthungerhilfe & Concern Worldwide, 2020). This same source has further disclosed that countries such as Ethiopia, Djibouti, Rwanda, Uganda, Kenya, Somalia, Sudan, South Sudan, and Eritrea are found in the Africa Sub-Sahara region. The source then concludes that Eastern Africa suffers from serious hunger given the differences among the countries.

Agarwal (2011) has noted that the contribution of women in developing countries for food security and nutrition reaches up to 70% though "--- there are poor women --- due to well-known intra-household distributional inequalities" (Agarwal, 2011: 15) that largely contributes to the African poverty, food insecurity, and hunger. Gaas (2019) has revealed that the SHGA in Somaliland is contributing to the achievement of the Sustainable Development Goal[15] (1). This paper further noted that SHGA is a rights-based approach, which views poverty as a denial of

[15] SDG goal (1) states that, by 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters

rights and poverty alleviation programs as a process of reclaiming rights. The major contribution of the SHGA is the formation of capital, initiation of internal lending, and incubation of multitudes of small businesses that helped poor women engage themselves and their family members in feasible economic activities.

A study conducted by Galiè *et al*. (2019) revealed that women's control over assets and income are positively associated with dietary diversity (both proxy indicators of micronutrients and thereby of good nutrition). The same report emphasized that when women are empowered to own, control, and decide on resources, they have the goodwill and capability to provide better quantity and quality of food for themselves and their children. Similarly, Rathinam and Akudugu (2014) asserted that the SHGA boosted women's access to productive resources and, the acquisition of entrepreneurial skills thereby contributed to their social, economic, and political empowerment. Women in SHGs exhibited improved household income levels, opened enhanced access to healthcare and education, and demonstrated improved household food security. Atieno (2017) has also noted that SHGA has boosted the asset acquisition of women and their households thereby contributing to improved household income. A study conducted by Gaas (2019) in Somaliland has also highlighted the significance of the Ethiopian prototype SHGA on women's thrift, saving and internal lending behavior development, opening up of thousands of new businesses and employment creation, improved household income, investing in children's health and education, personal safety, improved household consumption and women's decision-making capacity that are altogether crucial poverty reduction factors.

In conclusion, the reviewed materials suggest that SHGA counterattacks factors that propel destitution and food insecurity among which inequality in all its forms and at all levels, lack of access to affordable and simple credit services, lack of entrepreneurship skills, socio-cultural subjugations, lack of thrifts and domestic saving, male-dominated household decision-making practices, women's excessive engagement in reproductive and domestic activities that systematically deprives their engagement in productive activities that guarantee their asset acquisition, resource control and decision-making, and autonomy are the most critical ones. The reasons explained by the reviewed materials for the success of the SHGA in fighting against such socio-cultural, economic, and personal barriers to food security are the capability of the approach

to holistically empower women and advance members' capability and agency. Therefore, there are indications that women empowerment and household food security are positively associated.

iii. Implications of the SHGA to food security in Ethiopia and the study areas

In Ethiopia, there would be three categories of self-help approaches, namely the community-based self-help groups or associations, government-induced self-help groups or associations, and self-help groups that are imported from India and which is the focus of this dissertation work.

The community-based self-help groups that are common in Ethiopia include Idir (a social group of neighbors who primarily serve burial ceremony of the deceased member and are mourners with the deceased family for some days), Mahber (Mahber is a group of Orthodox Tewahdo Church followers that celebrate a monthly Saint's day by preparing food and drinks), Debo (is a cooperative work turn by turn among the group members) and Iqub (an indigenous saving culture among the savers) that serve relatively different purposes with complementary and inclusive nature. Ethiopia is the home of different indigenous self-help approaches and there is no available evidence of when and by whom these groups and associations were started.

Although each has its distinct function and role to play, different groups and associations serve multiple purposes, too. For example, (Kloos *et al*. 2003; Barr *et al*. 2015; Arega & Wubliker, 2015) wrote that Idirs are instrumental and established voluntarily to fight against poverty, withstand emergencies and resolve shocks, vulnerabilities, and economic crises. Similarly, Iqub plays economic and social roles (Temesgen, 2008). Furthermore, Mahber, also called 'Tsïwwa'[16] and Senbete are religious associations, particularly among Orthodox Christian believers to honor the Saints by serving foods and locally brewed drinks (Flemmen & Mulumebet, 2016).

On the other hand, the two most commonly known government-induced self-help associations in Ethiopia are the Saving and Credit Cooperatives (SACCOs) (FDRE, Negarit Gazette, 2016) and Micro and Small Enterprises (MSE). There are different types of cooperatives in Ethiopia such as marketing, sugarcane, milk, honey, consumers, SACCOs, producers, Oromia and Addis cooperative banks (ILO, 2009). While SACCO was first established in 1964 by the employees of the Ethiopian Airlines (ILO, 2009; Kifle, 2015), it is a legally registered economic association

[16] Tsïwwa is a drinking material made of clay with a narrow bottom and diverging mouth. It however also means the Mahber so that it serves both purposes. It is also called the "food of love" (Flemmen & Mulumebet, 2016:10)

established to provide saving, credit, and loan-life-insurance services to its members (Cooperative Proclamation of Ethiopia, 2016: 9438). MSE is also a legally recognized (Proclamation No. 32/1998) entity trusted to create employment opportunities for the unemployed and underemployed youth and adults, support the economic development and transformation (Fikadu, 2015; Tariku, 2018). Its development, however, shows a bell-shaped normal distribution curve between 2011 and 2017 (Tariku, 2018).

The SHGA that is imported from India in 2002. Following the disappearance of the government initiated Ras Agez (self-help) in the 1980s (Gebre, 2015), Ethiopia has introduced the current SHGA from India in 2002 through the support of a German Non-Governmental Organization (NGO), called KinderNotHilfe (KNH), in partnership with Ethiopian NGOs (CoSAP, 2017). This SHGA tries to address the whole-life of the members and the entire community. The concept of empowerment and institution building in the SHGA framework is depicted in Fig. 2.

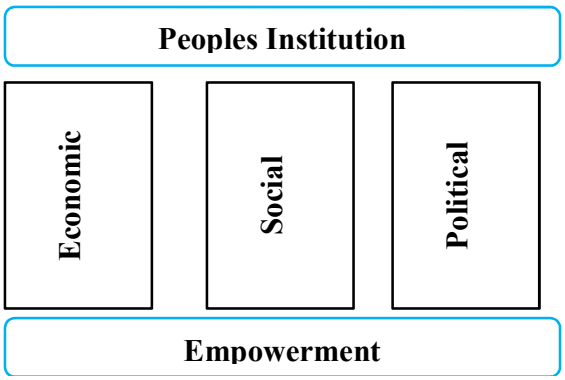


Figure 2: Empowerment pillars of the SHGA

KNH (2014) has further noted that SHGA has clearly stated principles such as critical analysis of the social, economic and political environments and starting with the poorest women. The same sources have further presented the features of the SHGA where the group is composed of 15-20 destitute women who meet on weekly basis, develop their own rules and sharing their life experiences, regularly saves money that serve as source of internal lending for group members, maintaining good records of their savings, loans and other activities. SHGA in Ethiopia focuses on vulnerable women. The focus on the poorest women has good reasons as evidences indicated that Ethiopian women are particularly disadvantaged in many ways and are often excluded from other development packages due to the patriarchal nature of the society. For example, FAO et al.

(2019) strongly argue that food insecurity and malnutrition disproportionately hit women and in every continent, the prevalence of food insecurity is higher for women than men. The importance of targeting on women is mainly justified because of their vulnerability and multiple responsibilities. Agarwal (2011) has noted that the vast majority (63%) of smallholder farmers in Africa is women and emphasized that women's role as producers, food handlers and managers and making the food safe for their own and their family is vital. In the entire food system, the contribution of women in developing countries for food security and nutrition reaches up to 70% though "--- there are poor women --- due to well-known intra-household distributional inequalities" (Agarwal, 2011: 15) regardless of the availability of food at aggregate including household levels.

Due to this, the SHGA in Ethiopia specifically aims at empowering the very poor women, regardless of their marital status, disability and health problems (FC, 2009; KNH, 2014; CoSAP, 2020). KNH (2014: 8) has in particular explained the reasons why Ethiopia wanted the SHGA to particularly focus on poor women as follows:

> It is touching to listen to a woman who used not to have sufficient means to support her children let alone to send them to school, proudly talk about the changes in her life and family, her ability to nourish and support her children and provide them with an education. It is inspiring to see groups of women who have for a long time felt marginalized by their poverty, making plans for how they can improve the communities they live in, and to see how they are gaining influence and appreciation in their communities despite having been previously ignored. It is very impressive indeed to meet women who, despite their poor background, now represent almost 2,000 households and who discuss and negotiate with politicians and other decision-makers to help bring about changes in the lives of their constituents. It is these changes in the lives of individuals, families and communities that keep us motivated to continue to work with our partners to follow the SHGA.

The reasons explained by KNH (2014) are clear. SHG members are poor and marginalized mothers. It is therefore to improve the situation of the poor and marginalized women and ultimately improve the lives of children born in the poor and marginalized households thereby contributing to the well-being of the future generation too. The statements KNH has put as its reasons to focus on poor and marginalized mothers in Ethiopia are also deep in the sense that if mothers are equipped with the necessary knowledge, skills, and attitudes and have sufficient resources to nurture their family members, the situation of the household can entirely improve.

The theoretical background has well informed this dissertation that SHGA in Ethiopia specifically targets disadvantaged women due to their socio-economic deprivation. Ethiopian women are largely asset-poor, less educated and trained, and heavily burdened by reproductive, productive, domestic, and community-wide roles. On the other hand, they are the most compassionate citizens. The SHGA aims to empower these compassionate citizens thereby promoting the general well-being and food security of individuals and the households.

1.14. Conceptual and Analytical Framework of the Research

The SHGA has a clear food security pathway. Kumar *et al*. (2018) noted that saving, credit, training, and bank linkage are the first steps in the SHGA. The access to loans leads them to invest in income-generating activities thereby improving their household income, asset accumulation, and consumption smoothening as immediate outputs. Finally, the pathway leads to improved resilience to shocks, access to food, improved intake of diverse nutrient-rich foods, and improved household food and nutrition security. Swamy and Tulasimala (2010) argue that access to credit helps ultra-poor women to improve their poverty situation and added that SHG-bank linkage has proven a positive linkage with food and non-food expenditure and consumption patterns.

KNH (2014: 14) elaborated that (1) "every human being has tremendous, God-given potential and this hidden potential in the poor can be unleashed and (2) as individuals, the poor are voiceless, powerless, and vulnerable. By bringing them together as a homogenous collective that is aware of their rights, they gain tremendous strength and can claim their rights". This same source has noted that society has pushed certain people to the margin and gradually, those marginalized people come to accept and internalize the situation they are thrown into. By ignoring the specific situations of the marginalized people, decision-makers, program developers and financial institutions worsen their situation. SHGA has the technique and capacity to bring out the innate potential of the poor and gradually foster their integration into the community. Other reviewed materials (e.g., IOM, 2016 and 2018) emphasize on the need to comprehensively focus on the individual, community, and structural factors to ensure food security. Writers such as Sariyev *et al*. (2020) analyzed the role of SHGA in women's psychological empowerment and decision-making power thereby to household food security.

The theoretical and analytical framework focuses on the identification of food insecure households, organizing 15-20 women from identified households into homogeneous SHGs, deploying facilitators who provide continuous mentorship, facilitate meetings and discussions, support bylaw development, and provide training, which leads to their knowledge acquisition, attitudinal change, and skills development necessary for self-managed regular meetings, saving culture and documentation capabilities. When they are aware of and analyze their socio-cultural, economic, natural, political, and physical environments, they pursue two directions: advancing their savings, initiating internal lending, strengthening social bondage and governance on one hand, and establishing cluster-level associations and the Federation on the other hand. When SHGs advance in their financial, managerial, and leadership skills and disciplines, members' personal, psychological, social, and economic empowerment boosts and the Federation strives to influence structural bottlenecks aiming at creating an enabling socio-cultural, economic, and political environment. Hence, the socio-cultural and economic empowerment and enhanced decision-making power of the SHG members, communitywide consciousness, and enabling socio-cultural and political environments altogether lead to household food security. Based on these theoretical underpinnings, the framework for this dissertation is coined in Fig, 2.

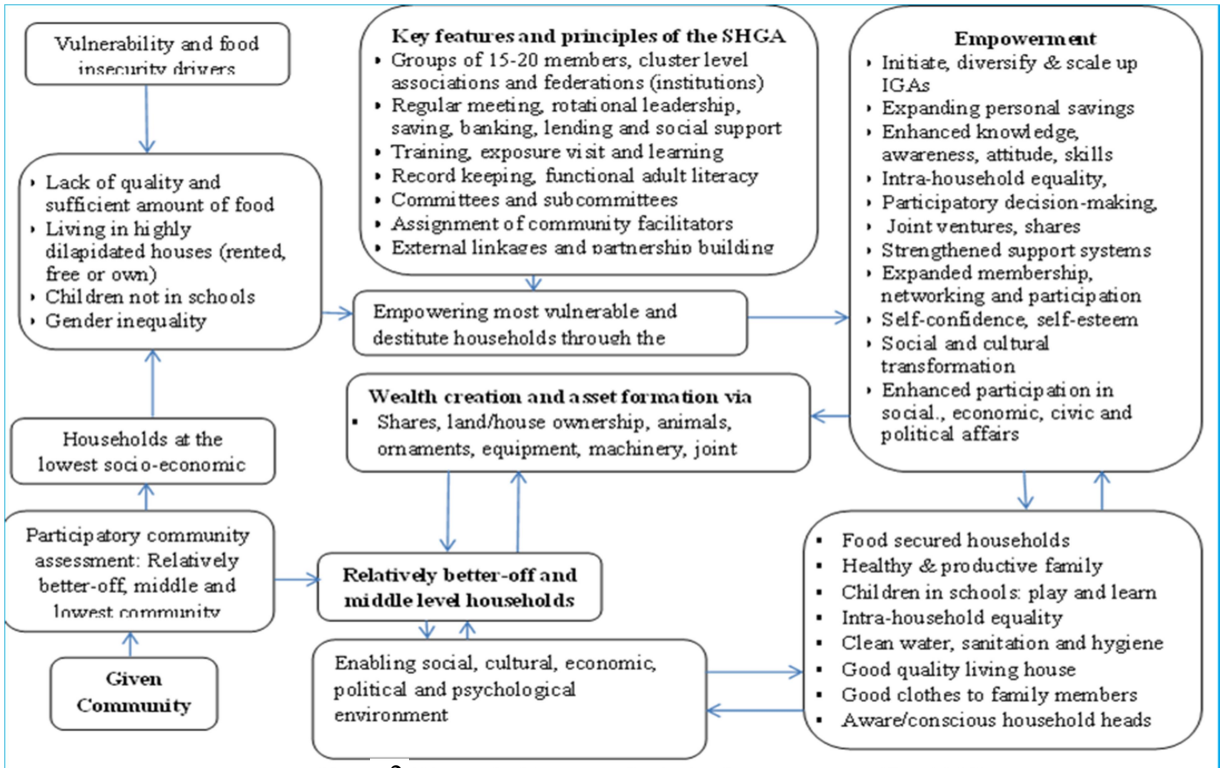


Figure 2 Theoretical framework, Author's construction (Oct. 2022)

1.15. Research Methodology

1.15.1. The philosophical foundations

The philosophical foundation of a research reflects the researchers' worldview, understanding, and methods used to measure social reality. In this regard, ontology explains the researchers' conception and understanding of a social reality as objective or subjective whereas epistemology refers to what the researchers accept as valid knowledge. The concepts of objectivism (i.e., the reality exists externally) and subjectivism (i.e., the reality exists in human conception, mind, and thought) lead to the choice of research methodology as quantitative or qualitative to verify that the knowledge generated is valid (Pessu, 2019). In understanding the social reality, researchers must choose either an objectivist or subjectivist assumption (Cohen, 2007). This leads to the point that either objectivist or subjectivist researchers' methodological philosophy refers to their conception and understanding of the social reality. However, Amanuel *et al*. (2022) in their research summarized the stances of Degefa (2006) and Reta *et al*. (2020) that social science research philosophies are supposed to remain flexible and hold middle-grounds between quantitative and qualitative methods so that they can effectively respond to their research questions. This middle-ground, flexible, and research question-focused mixed methods approach is well-accepted because social reality is understandable as something that exists within the individual mind rather than a reality out there though external factors influence individuals' cognition. Furthermore, knowledge is something that is subjective and personal, and human beings can determine their situation and destination.

Amanuel *et al*. (2022) has chosen pragmatism as an appropriate Worldview for social research that uses mixed method research approach. On top of this, the research methodology combines both quantitative and qualitative methods. Nonetheless, pragmatism is criticized for its emphasis on experiential learning (self-experience) and the subjective nature of knowledge. It is also challenged by the freedom it gives to the researchers without clear alignment to either post-positivist or subjectivist philosophy (Saad-Filho and Loureiro, 2018). In addition, Shusterman (2003) has noted that pragmatism believes that truth changes over time and space (not permanent) and individual differences matter in learning. Given such arguments, pragmatism is employed in this research because the philosophy allows using mixed methods research to better respond to the research questions.

1.15.2. Pragmatism as a philosophical foundation of this dissertation

As Dereje *et al*. (2022) elaborated in the dissertation, researchers with pragmatic philosophy have the discretion to choose and use mixed research design, methods, techniques, and procedures that best meet their research objective. They further noted that pragmatism, by way of allowing the researchers to use mixed-methods, reconciles the positivist/post-positivist perspective that holds a deterministic position to explore cause-effect relationship through experimental research design and social constructivist (that forces researchers to use purely qualitative research method) philosophical foundations. Amanuel *et al*. (2022) have also stressed the need to apply a pragmatist philosophical Worldview in social science research endeavors to use mixed methods thereby responding to research questions instead of choosing either positivist or subjectivist viewpoint with implication to depend on either quantitative or qualitative research method only. Creswell (2009) clarified that quantitative and qualitative methods do not contradict but are found on different sides of a continuum. This same author has further asserted that pragmatism gives a philosophical view for research because individual researchers have the liberty to choose and concludes that pragmatism opens doors for mixed method researchers to apply multiple methods, different Worldviews, different assumptions, forms of data collection and analysis.

Accordingly, the focus of this dissertation was on the understanding of the research topic, the research problems, and questions that convinced the use of mixed research approaches to derive knowledge. This philosophy gave the researchers full freedom to use pluralistic (or eclectic) approaches to properly respond to the research questions that require both quantitative and qualitative research methods without attaching to one philosophical stance. Furthermore, it is believed that the findings of quantitative research need to be complemented and verified by qualitative methods or vice-versa to reach a conclusion with sufficient evidence.

1.15.3. Research design and approach

The phrase "*research design*" would have different components. For example, Creswell (2009) described it as researchers' choice between and among qualitative, quantitative, or mixed methods depending on their statement of the problem, research objectives, research questions, and personal experiences, among others. On the other hand, Singh (2006) explains that research design is all about selecting appropriate research methods, sampling design, choice of research

tools, and statistical techniques for the research. Cohen (2007) has simply defined research design as a research plan that leads researchers from the statement of the problem to writing the research finding. Considering such philosophical foundations and research methodology, this dissertation followed a concurrent mixed research design. Concurrent mixed research design means the use of both quantitative and qualitative datasets. This saved researchers' time and boosted their resource efficiency. Furthermore, it allowed getting both quantitative and qualitative datasets readily available at a time so that data triangulation was easy at the time of data generation, analysis, and synthesis.

1.15.4. Sample size determination and sampling techniques

A) Sample size determination

According to Yalew (2017), sample size can be determined by considering the research methodology, significance of the research, types of hypotheses, available financial resources, and size of the study population. Yalew further noted that sample sizes that are about 120 or more per group (i.e., intervention and control group) are sufficient for survey-based research. Lemeshow *et al*. (1990), Kothari (2004), and Kiros (2009) are among the scholars that propose the use of a sample size determination formula based on certain levels of confidence interval and margin of error. Because this research used two independent samples taken from two independent study populations, the following Lemeshow *et al*. (1990) two independent samples determination formula was used to decide on the sample size of each group.

$ni = \{p_1(1-p_1)+p_2(1-p_2)\}(Z/E)^2$ ---------- *(1)*

Where
- ni is the required sample size
- p_1 & p_2 are proportions of successes of the groups
- Z is the confidence level (1.96)
- E is the margin of error (7.07%)
- $P_1=P_2=0.5$

This formula yields a sample size of 192 respondents per group. This must be multiplied by two because of two independent samples drawn from two study populations.

Accordingly, *n= ((0.5*(1-0.5) + 0.5*(1-0.5))*(1.96/0.0707)2=0.5*768=384* ---------- *(2)*

Furthermore, non-response is expected due to possible unwilling samples, samples that would have left their residents for a long period and would be unavailable during the data collection time, family separation/union in other places, and so on. For this purpose, the WHO (2012) Non-Response Rate (NRR) formula (estimated at 27%) was used to get reliable sample size. Hence,

Final sample (N) = Ni/1-NRR = 384/1-0.27 = 488 ---------- (3)

While NRR can be as low as 5%, the researchers increased NRR to 27% to get a larger number of respondents adequate to apply inferential statistics during the analysis period. Kothari (2004) suggests the use of an optimum sample size that meets the requirements of efficiency, representativeness, reliability, and flexibility. Furthermore, Vaus (2001) elaborated that increasing the sample size beyond a certain point yields marginal benefits. Considering all such vital evidence, the research purpose, the researchers' capacity, and all the necessary adjustments, 492 respondents were used as primary sources of data for this research.

B) Sampling design

The SHGA exists in 6 Kebeles of Debre-Marks City and seven (7) Kebeles of Gozamin district. For efficiency reasons in terms of finance, time and logistics, a two-stage random sampling design was employed in this research. First, an equal number of Kebeles (3 from Debre-Markos City and 3 from Gozamin district) were selected randomly. Second, a list of SHG members and households not organized in the SHGs in the randomly selected Kebeles were developed separately forming two sampling frames. This sampling design was preferred to single stage sampling because it is efficient, easy to administer, coordinate and control the quality (smaller geographic locations than the single stage sampling) during field data collection.

C) Sampling frame

The sampling frames for this research were separate lists of SHG members and women not organized in the SHGs in the randomly selected 6 Kebeles of the study areas. The lists of women not organized in the SHGs were made by the Cluster Level Association and Federation chairpersons (leaders). Then, the identified women were organized in SHGs. Therefore, the lists of women already organized in the SHGs and newly organized women contained the total number of women forming two sampling frames. Once the two sampling frames were established, the required samples were randomly selected from each sampling frame using probability proportional to the size of the study population. In both cases, a woman represents her household. This ensures certain levels of homogeneity among women already organized in the SHGs and newly identified women in terms of demographic characteristics such as age as well as representativeness at the household level.

D) Sampling technique and sample distribution

From the two sampling frames, a sample of 247 women organized in the SHGs and 245 women who were not organized in the SHGs were randomly selected using probability proportional to size. This sample distribution method distributes the study units among women organized in the SHGs and not organized in the SHGs randomly thereby not concentrating many units in few clusters disproportionately.

1.15.5. Data sources and data collection methods

This research used both primary and secondary data sources.

Primary data sources: The data sources of this dissertation were 247 women organized in the SHGs, 245 women not organized in the SHGs, 6 FGDs (one per Kebele), 15 Governmental, financial intermediaries, community facilitators, and non-governmental actors, and observations of 10 individual/group economic activities relevant to SHGA and household food security.

Secondary data source: Relevant documented sources in the fields of household food security, SHGA, women's decision-making, and household food security determinants were mobilized and reviewed as secondary data sources. Dissertation papers were also mobilized and reviewed.

Data collection methods: This dissertation was started during the COVID-19 pandemic period. Because of the national state of emergency and the practical health risks of covid-19, all the necessary precautions were taken such as the use of face masks, sanitizers, and avoiding shaking hands when meeting people in the training organized for survey data administrators. Furthermore, the data collection was made using data collectors' mobile phones (Kobo Toolbox) so that paper and pen contacts were avoided. Other important COVID-19 protection methods such as keeping one's distance from the respondent were included in the instruction of the survey. Therefore, standard precautions and COVID-19 protective measures were applied to maintain health and safety. Considering these cautionary measures, the research work has applied the following data collection tools to collect data from primary sources.

1. ***Structured household survey:***

Before the actual administration of the survey tool and collection of the data, a survey questionnaire was piloted, improved, and translated into the local language of the study

communities. Using a structured household survey, quantitative/frequency data were collected aimed at measuring;

i. The access and stability dimensions of household food security. The data for this objective were collected following three complementary methods and their standard data collection tools (appendix 1) were applied. The purpose was to identify households' experience-based food security/insecurity situations.
   - ➲ The Household Dietary Diversity Score (HDDS) helps to assess households' access to a sufficient variety of foods (with 24 hours recall period). This has helped to measure food diversity thereby quality based on the 12 food groups[17];
   - ➲ Months of Adequate Household Food Provisioning (MAHFP);
   - ➲ Household Food Insecurity Access Scale (HFIAS) within a four-week recall period. HFIAS in particular captures the respondents' behaviors, attitudes, feelings, and consequences of food insecurity with a particular focus on uncertainty/anxiety, insufficient quantity and quality of food consumed within the reference period, reduced amount of food intake, consequences and shame for getting food in a socio-culturally unacceptable manner (Coates *et al.* 2007).

These three household food security measurement methods provide a range of recall periods (24 hours, 30 days, and 12 months) which were important to triangulate and validate data obtained through different methods and recall periods. The use of these multi-faceted food security measures allowed the researchers to collect and analyze the different dimensions of food security through household survey data only though qualitative methods were added for more empirical evidence. Furthermore, this allowed researchers to reduce the limitation of a single food security measure. More importantly, the use of the fourth-generation food security measure (HFIAS) complemented with HDDS (which is similar to the food consumption survey tool) makes the research more robust and provides better results (Ike *et al*. 2017).

ii. Women's decision making

The study relied on a quantitative dataset collected from primary sources using a structured survey questionnaire. A survey questionnaire comprised of 16 women empowerment indicators

[17] The 12 food groups include cereal grain staples, roots and tubers, vegetables, fruits, meat, eggs, fish, pulses, legumes and nuts, dairy products, oils and fats, sugar, honey and condiments

at individual and household levels was constructed. The question types were binary where zero (0) point was accorded for the absence of a decision by the respondent (or disempowerment) while one (1) point was assigned for decisions made by the respondent women solely or jointly with their husbands-empowerment (Feiruz & Fanaye, 2015; Lombardini *et al*. 2017; Roy *et al*. 2018). In this weight assignment, zero represents the absence and one represents the presence of women empowerment. It was decided to have binary indicators considering respondents' time, and comprehension capacity and to ease data analysis and interpretation. All questions were given equal weights to simplify the data encoding and analysis as well as to avoid subjective assignment of different weights for different women empowerment indicators (Feiruz & Fanaye, 2015; Roy *et al*. 2018).

Then, data collected from 284 married respondents (146 organized in SHGs and 138 not organized) were used for this objective because they have husbands who would negotiate and influence their decisions or, at worst, completely decide alone on behalf of the respondents. Hence, the unmarried, divorced, widowed, or separated (n=208) respondents were excluded from the analysis. Women empowerment indicators included in the study are presented in Table 3.

Table 3: Women empowerment indicators (equal weight assigned)

SN	**Domain**	**Indicators (i)**	**Weight (wt)**
1.	Individual	Can you borrow some money other than your husband for personal use (i1)?	0. No, I cannot borrow 1. Yes, I can borrow
2.	Individual	Can you go to the market/other places alone without the permission of your husband (i2)?	0. No, I can't 1. Yes, I can
3.	Individual	Can you visit your relatives and/or friends without the permission of your husband (i3)?	0. No, I can't 1. Yes, I can
4.	Individual	Can you attend local community meetings without the permission of your husband (i4)?	0. No, I can't 1. Yes, I can
5.	Individual	Who decides where to pass your time (i5)?	0. My husband 1. I or jointly
6.	Individual	Who decides on your healthcare, checkups, and treatments (i6)?	0. My husband 1. I or jointly
7.	Household	Who decides whether you become pregnant or not (i7)?	0. My husband 1. I or jointly

SN	**Domain**	**Indicators (i)**	**Weight (wt)**
8.	Household	Who decides whether you can use the family planning method or not (i8)?	0. My husband 1. I or jointly
9.	Household	Do you need the permission of your husband to purchase food items for the family (i9)?	0. Yes, I need permission 1. No, I do not need
10.	Household	Who decides whether school-age children should be enrolled in school or not (i10)?	0. My husband 1. I or jointly
11.	Household	Who decides on the money you generated (i11)?	0. My husband 1. I or jointly
12.	Household	Who decides on assets you accumulated (i12)?	0. My husband 1. I or jointly
13.	Household	Who decides on what foods and drinks to prepare for the family (i13)?	0. My husband 1. I or jointly
14.	Household	Who decides on the purchase of household assets and equipment (i14)?	0. My husband 1. I or jointly
15.	Household	Who decides on the sale of household big animals like cows and/or ox (i15)?	0. My husband 1. I or jointly
16.	Household	Who decides on the sale of household small animals like sheep/goats and hens (i16)?	0. My husband 1. I or jointly

Adapted from Roy *et al*. (2018)

Four relevant data analysis techniques are applied to analyze women's empowerment levels. The women's decision-making power was analyzed based on the women's empowerment index value. The cut-off points for women empowerment were decided based on Roy *et al*. (2018). Accordingly, 0.8 (or 80%) is adopted as the threshold for adequate empowerment level, below which is inadequate. Second, an independent samples t-test was used to check whether the means of the two independent samples were statistically significant or not. Third, HFIAS was used to measure the food security situation of the households. Finally, binary logistic regression was used to know the direction and measure the magnitude of the association of women's decision-making power with their household food security situation.

iii. Household food security determinants

The data sources for studying the household food security determinants were 246 urban and 246 rural residents. Out of them, 247 were organized and 245 were not organized in SHGs (N=492). The household food security status of the study households was measured by HFIAS, which was re-coded as a dichotomous response variable (0=food insecure and 1=food secure). Based on the dichotomous response variable, survey data were analyzed using binary logistic regression. According to Gujarati (1995), the binary logistic regression model can be represented as:

$Li\text{-}In(pi/(1\text{-}pi) = \beta 0+\beta iXi$ ---------- (3)

Where pi = the probability that Y = 0 (that a given household is not food secured);

1-Pi = the probability that Y = 1 (that a given household is food secured);

Li = the natural log of the odds ratio or logit;

β0 = the intercept or the value of the log odds ratio, Pi/(1-Pi) when explanatory variable is zero;

βi = the slope that measures the change in L (logit) for a unit change in explanatory variables

Xi=lists of explanatory variables included in the study.

The following tool administrators and data collectors with their specific roles and responsibilities have collected the survey data.

i) The principal researcher has guided the overall data collection process including ethical protocols and quality measures. The researcher has administered qualitative data collection instruments.

ii) The structured household survey questionnaire was translated into the Amharic language to ease understanding and interviewing and it was pilot-tested. Improvements were made based on the input obtained in the pilot-test analysis. This has improved the simplicity, understandability, completeness, and flow of the survey tool.

iii) Locally available paid female data collectors were recruited and trained on the purpose of the research, eligible research respondents, sample selection techniques, ethical considerations, COVID-19 safety measures, interview methods, and data capturing and reporting mechanisms. The training was provided using the Kobo Toolbox uploaded on their mobile phones.

iv) The Kobo toolbox provides the privilege to strictly follow skip patterns so that data consistency and completeness are assured from the beginning. The technology works

offline, allows editing before sending, and data collectors can interview as many respondents as possible by saving completed questionnaires before sending. Data were exported from the Kobo toolbox to SPSS software for data generation and analysis.

2. ***Focus group discussion (FGD):*** FGD is a method of bringing 8-10 discussants of similar backgrounds to brainstorm, discuss, and [agree] on the issues raised. The issues were also focused: on household food security, its determinants, and constraints. Overall, six FGDs were conducted. Discussants were drawn from the SHG structure (i.e., SHG, associations, and the federation) and women not organized in the SHGs. FGD guidelines were developed (appendices 2 & 3).
3. ***Key informant interview (KII):*** KII is a data collection method from purposely selected key experts of relevant stakeholders. Specifically, the then women, children and youth affairs, micro and small enterprises development office, rural/urban safety-net program, job opportunity creation offices and local administrations from government bodies, Facilitator for Change from non-governmental organizations, SHG facilitators and one staff from the consortium of self-help group approach promoters were included in the KIIs. Experts from Harbu Micro Finance Institute which has been closely working with the SHGA in the study areas were interviewed. These organizations were selected purposely to get the utmost relevant and in-depth information about the SHGA, its contributions to household food security, and determinant factors. In total, 15 KIIs were conducted. Different KII guidelines were developed considering the roles of the informant offices in promoting household food security (appendices 4-6).
4. ***Observation:*** Observation, which was followed by an in-depth interview, is another tool applied to collect tangible empirical evidence on the group and individual socio-economic activities and living situations of households. Five observations to women's activities that were organized in SHGs and another five observations to women's activities that were not organized in SHGs were made. The observations focused on their socio-economic activities, living situations that indicate food access and stability at household levels, and associated challenges. An observation guideline was developed and applied for households organized in SHGs and not organized in SHGs (appendix 7).

1.15.6. Data management and presentation

The quantitative household survey data were transported into Statistical Packages for Social Sciences (SPSS) v.25 software for data cleaning, data production, and analysis. On the other hand, the qualitative data were thematically categorized based on the research topics, sub-topics, and themes.

1.15.7. Variable specification

For this dissertation research, Independent Variables (IVs), intermediate variables and Dependent Variables (DVs) were identified at an early stage of the dissertation work (Table 4).

Table 4: Study Variables

Independent Variables	**Intermediate Variables**	**Dependent Variables**
Sex, age, marital status, family size, educational status, place of residence, landholding size, membership, exposure to trainings, regular meeting, having mentors	1) Awareness 2) Saving culture and access to credit 3) Entrepreneurship, job & income 4) Support system 5) Women's asset acquisition 6) Women's decision-making power	Households' sustainable access to food (Access and stability)

The IVs are a mix of variables that are common to both groups of respondents and variables that were expected to be specific to SHG members alone because of their membership and other opportunities. However, the intermediate variables are expected middle-level effects of the IVs that further influence the DVs.

1.15.8. Data analysis techniques

Data analysis techniques were chosen based on the research objectives, research questions, research hypotheses, the structure of the data collection tools, and the robustness of the techniques. There was also flexibility to apply multiple data analysis techniques for a particular research objective. As data analysis techniques vary across the research objectives, details are presented under each chapter of the dissertation. But generally, descriptive and inferential

statistical data analysis techniques that include percentage, chi-square test, and ordinary least squares regression were the data analysis techniques used in this dissertation (Table 5).

Table 5: Summary of data analysis techniques by research objectives

Research objectives	**Key research questions**	**Data analysis**
Investigation of food security status of households organized and not organized in self-help groups in Debre-Markos City and Gozamin district	1. What is the food security status of households organized and not organized in the SHGs? 2. How stable is the food security status of the two groups of respondents? 3. How suitable and acceptable are the food varieties of the two study groups?	HFIAS, HDDS, MAHFP, descriptive statistics, logistics regression and thematic sorting of qualitative data.
Investigate the determinants of food security of households organized in SHG and not organized in SHGs in Debre-Markos City and Gozamin District	1) What are the variables that determine the food security status of households organized and not organized in SHGs? 2) Which of the food security determinants have statistically significantly influenced the food security status of households organized and not organized in SHGs?	HFIAS, descriptive statistics, chi-square test, binary logistic regression, and thematic sorting of qualitative data.
Levels and differentials in the Decision-Making Power of Women Organized and Not Organized in Self-Help Groups in Debre-Markos City and Gozamin District	1) What is the level of the decision making power of women organized and not organized in SHGs? 2) Does SHG membership contribute to women's decision making power?	Women empowerment index, ordinary least squares regression and thematic sorting of qualitative data.

CHAPTER TWO: THE FOOD SECURITY STATUS OF HOUSEHOLDS

2.0. Abstract

Self-help group approach is one of the most employed global instruments to psychologically, socially, economically and politically empower marginalized community members. Ethiopia is not an exception. This paper compares the food security status of households organized in self-help groups and households not organized in self-help groups in Debre-Markos city and Gozamin district of Ethiopia. Socio-economic and food security data were collected from 492 respondents. Household Food Insecurity Access Scale, months of adequate household food provisioning and household dietary diversity score were used to analyze the survey data. The household food insecurity access scale revealed that 25.7% of the self-help group members were food secure and the other 36.1% of them were mildly food insecure. These figures are higher than the proportion of food secure (16.9%) and mildly food insecure (31.7%) statuses of respondents who were not organized in self-help groups. Findings of months of adequate household food provisioning showed that greater proportion of the self-help group members (42.9%) was least food insecure than women not organized in self-help group respondents (37.6%). Household dietary diversity score results found out that greater proportion of the self-help group members (63.2%) had suitable dietary diversity than respondents not organized in self-help groups (31.3%). In conclusion, households organized in self-help groups were found to be better in their food security status than those that were not organized in self-help groups. Researches on the implications of the self-help group approach to household food security that will consider self-help groups operating in other regions and the availability, access, utilization and stability pillars of food security would provide a more comprehensive picture.

***Keywords**: self-help group approach, food security, access, diversity, stability*

2.1. Introduction

Food security is an evolving, flexible and complex concept. Its complexity, dynamism and evolution can be the results of the search for the most suitable definition, measurement and indicator for it and persistence challenges humankind is facing to attain it. Researchers have been theorizing about food security. As Leroy *et al*. (2015) and Coates *et al.* (2007) indicated, the complexity of food security can be expressed by the height (i.e., global, regional, national, household and individual), components (like quantity, quality, safety, cultural acceptability and preference) and pillars (availability, accessibility, utilization and stability). According to FAO (1996), "Food security exists when all people, at all times, have physical, [social] and economic access to sufficient, safe and nutritious foods which meets their dietary needs and food preferences for an active and healthy life".

Hendriks (2015) clearly put food insecurity as a continuum where communities, households and individuals swing between and among the extremities of vulnerability to become food insecure and complete food secured. Gupta and Vegeline (2015) and FAO *et al*. (2019) have clearly shown that inequality, in all its forms and levels, hinders household food security and further noted that women are the most affected people by inequalities. Besides, Castell *et al*. (2015) reported that the principal drivers of household food insecurity are social injustice and inequality coupled with denial of economic, social, cultural and environemntal rights of people. Grebmer *et al*. (2020)[18] cautioned that, if the condition is not reversed, nearly 37 countries would be less likely to achieve low level of hunger by 2030. The Ethiopian Planning and Development Commission (2018) reported that the poorest sections of the rural and urban community did not benefit from the overall economic growth and development. The same source has noted that the reasons behind the overall poverty reduction in the country is partly attributed to other pro-poor development interventions such as Productive Safety Net and household asset building programs. These two important food security programs were also aid-driven and may not bring sustainable economic growth and development towards stable food security status in the future. It has been made clear that there is lack of grassroots level work that reaches and fundamentally helps the poor, marginalized and destitute community members to unleash their latent potentials thereby ensure their households' food security by their own efforts.

[18] *Global Hunger Index ≤ 9.9 (Low), 10-19.9 (moderate), 20-34.9 (serious), 35-49.9 (alarming) and ≥ 50 (extremely alarming)*

It is learnt that inequality in all its' forms which include lack of equal access to education and training, healthcare, affordable credit services, lack of social networks for mutual support and experience sharing, physical and natural resources like land, gender-inequality at household and community levels. On the other hand, lack of grassroots interventions that target on the poorest sections of the community thereby empower them to unleash their hidden potentials contribute to household food insecurity. Therefore, development approach that reduces, at best eradicates, inequality in all its' forms on one hand and target on the capability development of the most disadvantaged community members, especially women, is necessary to ensure the food security of vulnerable households.

On the other hand, there are different, sometimes complementary, development approaches aimed at poverty reduction, women empowerment and livelihood improvement. Amanuel *et al*. (2022) noted that food availability, income-based, basic needs, entitlement, sustainable livelihoods, women empowerment and the political economy analysis as alternative development models that support household food security efforts. Calves (2009) further commented on the limitation of vertical economic growth to ensure the wellbeing and food security of households that are in the lowest ladder and recognizes the importance of promoting bottom-up approach, especially grassroots women's institutions that empowers the powerless.

Self-Help Group Approach is widely recognized as one of the empowerment approaches to sustainable development and household food security. Many scholars noted that countries in advanced economies, Asia and Africa use the SHGA as one of their development, women empowerment and food security strategies (Borkman, 1976; Sundaram, 2012; Biscaye *et al*. 2014; Rathinam and Akudugu, 2014; Atieno, 2017; Kumar *et al*. 2018; Gaas, 2019). The Grameen Bank that started lending money for the poor women through group collateral system, the Mysore Resettlement and Development Agency that piloted the SHG model and the National Bank for Agricultural and Rural Development of India that extended funds for SHGs and its declaration on SHG-Bank linkage program rapidly pulled the SHG approach from the Northern Industrialized nations to South-East Asia (Entz, 2016). The government of India has also attached significant importance on the role of SHG approach to successfully implement its 9th National Five Year Plan (1997-2002) thereby liberate women from poverty (Sundaram, 2012). Swamy and Tulasimala (2010) noted that SHG approach brings all development programs into

one model. Many writers also believe that the SHGA is helpful for improved participation of the very poor people, inclusion of the excluded, advancing gender equality, opening widows for financial access, expand income opportunities and improve livelihoods thereby to household food security (Atieno, 2017; Kumar *et al*. 2018; Rawat, 2014; Sundaram, 2012; Swamy and Tulasimala*,* 2010; Swamy and Tulasimala, 2013).

During the 1980s, Ethiopia adapted the SHG approach in the name of *Ras Agez*[19]. The primary objective was to expand job opportunities whereby government provides land and working capital and group members mobilize their labor and skill (Gebre, 2015). As the 1980s initiative was not endorsed by the new Government that took power in 1991 for unknown reasons, the SHG approach was re-introduced from India into Ethiopian in 2002 through the initiatives of civil society organizations and their donors (CoSAP, 2018). The approach focuses on building 1) individual critical awareness, self-esteem and self-confidence, knowledge, skills, attitudinal and behavioral changes 2) community-wide access to basic services, development and social transformation and 3) system and structural changes. It also focuses on institution building by forming SHGs, CLAs and Federations. SHG members are engaged in regular meeting, saving and internal lending, keep records, exercise rotating leadership, build social networking and share experiences (KNH, 2014; Das, 2016). Several assessments, researches and program/project evaluation findings (CoSAP, 2017; Gebre, 2015; ODI, 2016) documented the contributions of SHG approach to women's social and economic empowerment. Gaas (2019) wrote that Somaliland has learnt about SHGA and its contribution to women empowerment from Ethiopia. Focus group discussants organized in self-help groups from Gozamin district have noted that their household food security is highly improved because of their active participation in the SHGs. A woman said, "We were one of the least food secure households in our village. I realized this when community members conduct participatory wealth ranking using different color papers, sands, dry and green leaves. But now, I have no problem of feeding my children and family members. I take loan from my group and invest on small business activities like chicken, and brewing and selling local liquors."

[19] The term Ras Agez is a local language that literally means self-help

Albeit such promising contributions of the SHG approach to women empowerment, improved household income and poverty reduction, there are dearth of studies that explored the implication of the SHGA to household food security in Ethiopia in general and in the study areas in particular. Hence, this paper aims at contributing to bridge the knowledge gap in the context of Debre-Markos city and its' surrounding rural areas, in Northwestern Ethiopia. While the research objective was to explore the food security status of households organized and not organized in SHGs in the study areas, the following three research questions guided the investigation.

- What is the food security status of households organized and not organized in the SHGs?
- How stable is the food security situation of organized and not organized households?
- How suitable and acceptable are the food varieties among the study households?

2.2. Conceptual and Analytical Framework

Household food insecurity is a volatile continuum where households move from the edge of vulnerability to become food insecure to complete food secure (Hendriks, 2015). It is the product of multiple drivers. Studies by Gupta & Vegeline (2015) and FAO, *et al.*, (2019) showed inequality as the barrier of household food security. The Planning and Development Commission of Ethiopia (2018) reported that lack of grassroots level interventions excluded the destitute community members from enjoying the economic development the country had attained. These synopsis indicate that bottom-up development approaches that specifically engage the food insecure community members such as women and empowering them to develop their holistic awareness, confidence, transform their knowledge, skills, attitudes and behaviors and create their access to affordable credit services, social networks, income opportunities and building their decision-making powers are instrumental to broad-based household food security.

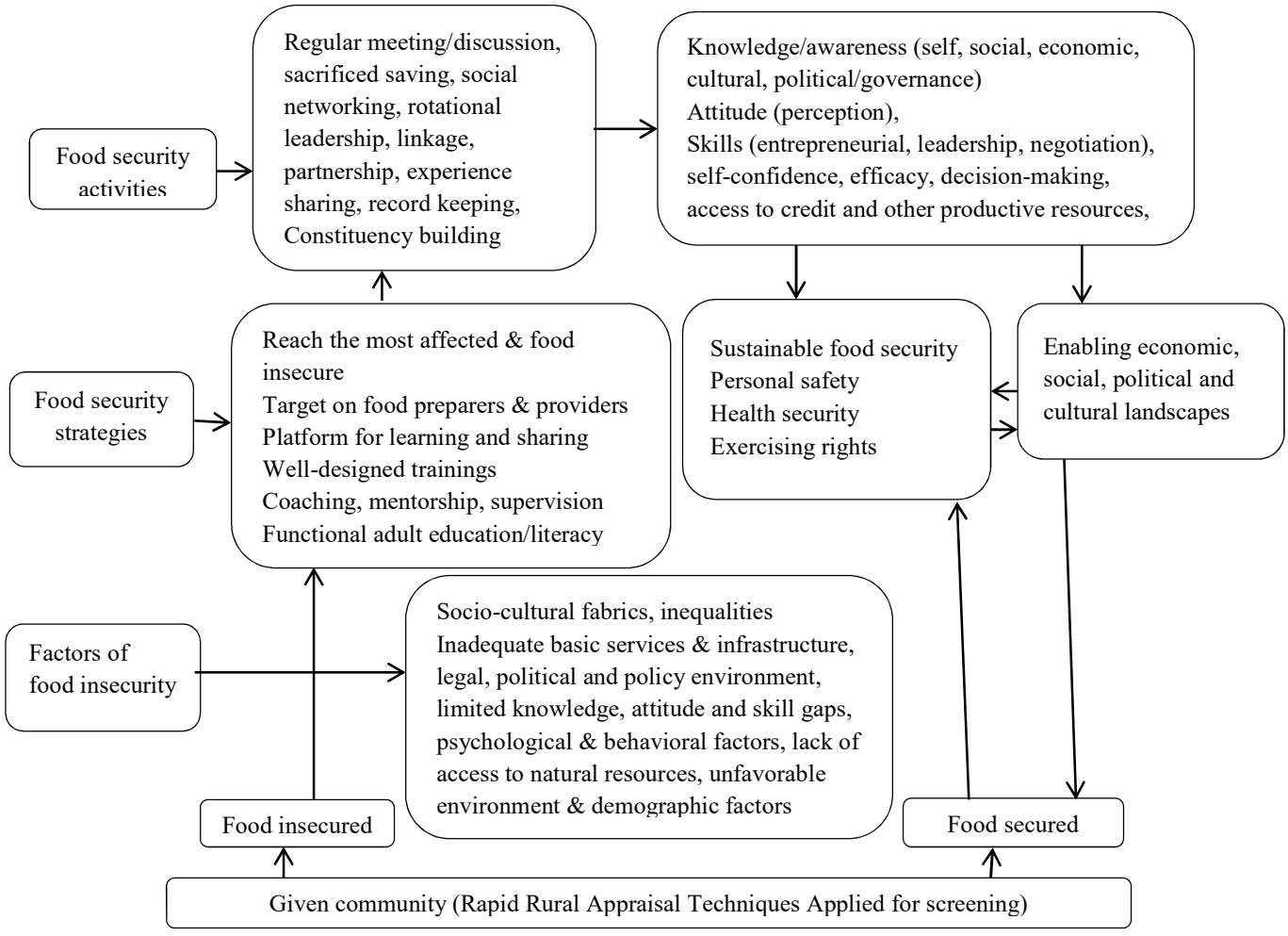


Figure 3: Household food insecurity variables and food security strategies and activities.
Source: Authors' construct

Studies (Calves, 2009; Huis *et al*. 2017) propose different but complementary approaches that potentially contribute to the food security status of nations, households and individuals. Economic growth, sustainable livelihoods and empowerment are among the proposed approaches. By empowering and engaging destitute women, the SHG approach has clear food security pathway. For example, Kumar *et al.* (2018) noted that saving, credit, training and bank linkage are the first steps in the SHG approach that lead to access to loan to purchase household assets. This leads to improved household income, asset accumulation and consumption smoothening as immediate outputs. Ultimately, improved resilience to shocks and improved household food security are attained. Bland & De-Robertis (2019) explained that human beings are conscious, goal oriented, seek meaning, able to select responsibly and supersede the sum of their parts. On top of this, KNH (2014: 14) has noted that:

> Every human being has tremendous, God-given potential and this hidden potential in the poor can be unleashed if an enabling environment is provided and as individuals the poor are voiceless, powerless and vulnerable. By bringing them together as a homogenous collective that is aware of their rights, they gain tremendous strength and can claim their rights.

The SHGA in Ethiopia identifies the food insecure households, organize them into homogeneous women SHGs of 15-20 members, assigns them trained facilitators who provide continuous mentorship, facilitate SHG discussion, SHG record keeping, bylaw development and training. When SHG members are able to aware and analyze their own situation, the social, economic, natural, political and physical environments, they pursue in two directions: advancing their personal development, savings, internal lending, economic activities, social bondage and governance on one hand and vertical institution or power building (i.e., establishing CLAs and the Federations) on the other hand. While SHGs focus on individual and household level affairs such as awareness and skills development, economic activities, financial disciplines, leadership and decision-making, the cluster level associations and federations focus on activities that are beyond the capacities of the SHGs such as creating an enabling socio-cultural, economic, legal and political landscape at community, society and country levels. Therefore, SHG approach has the technique and framework to cut household food security barriers short and empower women for sustainable household food security. Women play critical roles as producers, gatekeepers of food access in the households and access and resources management.

2.3. Methodology

2.3.1. Data sources and data collection methods

Socio-demographic and food security related data were collected from 492 (247 organized and 245 not organized in SHGs) women respondents aged ≤ 49 years old. The household survey data on access, dietary diversity and stability dimensions of food security were collected by a structured survey questionnaire that was piloted and translated into local [Amharic] language. Data were collected by trained data collectors using Kobo Toolbox mobile application. In addition, 6 FGDs (one per Kebele) and 15 KIIs were conducted with relevant governmental and non-governmental actors and one financial institute.

2.3.2. Data analysis

Household survey data collected on household food security on the dimensions of food access, stability and diversity were analyzed based on the most relevant, commonly used and rigorous food security/insecurity measurement techniques as elaborated hereunder.

i. Survey data were analyzed based on one of the most relevant household food security measurement techniques called, Household Food Insecurity Access Scale (HFIAS). As Coates *et al*. (2007) noted, HFIAS measures household food insecurity from access point of view. It captures the feelings of uncertainty or anxiety of an important household member, mainly engaged in preparing food and serving meal, over food, perception on the sufficiency of the amount and quality of food and reduced food intake and its consequences and the feelings of shame for taking socially undesirable means. HFIAS has nine occurrence and nine frequency-of-occurrence questions. After piloting and adaptation, these questions were used to collect food security data from the survey respondents. The calculations, meanings and interpretations of HFIAS are given in Table 6.

Table 6: Basis for calculating, interpretation and meanings of HFIAS outputs

Questions	**Frequencies**		
(Q)	**1= Rarely**	**2= Sometimes**	**3= Often**
1	Food secured	-	-
1a	Food secured	Mildly food insecure	Mildly food insecure
2a	Mildly food insecure	Mildly food insecure	Mildly food insecure

Questions (Q)	Frequencies		
	1= Rarely	**2= Sometimes**	**3= Often**
3a	Mildly food insecure	Moderately food insecure	Moderately food insecure
4a	Mildly food insecure	Moderately food insecure	Moderately food insecure
5a	Moderately food insecure	Moderately food insecure	Severely food insecure
6a	Moderately food insecure	Moderately food insecure	Severely food insecure
7a	Severely food insecure	Severely food insecure	Severely food insecure
8a	Severely food insecure	Severely food insecure	Severely food insecure
9a	Severely food insecure	Severely food insecure	Severely food insecure
Note	1 (rarely) = respondent HH experienced food insecurity 1-2 times in the past four weeks 2 (sometimes) = respondent HH experience food insecurity 3-10 times (past four weeks) 3 (often) = respondent HH experience food insecurity more than 10 times (four weeks)		

Source: Adapted from Coates *et al*. (2007).

Respondents who reported 'No' to HFIAS Q1, "In the past four weeks, did you worry that your household would not have enough food?" and those who answered 'Yes but worried rarely (1-2 times)' in the past four weeks are added into a food secured household category. Respondents who responded 'No' to HFIAS Q1 were blocked from accessing and responding to consecutive HFIAS questions (i.e., Q2-9) as they confirmed that their household did not worry about lack of enough food in the reference period.

Other respondents were entered in the category of food insecure for the purpose of this study so that the data was binary or categorical (i.e., either food secured or food insecure). To broadly classify research respondents into food secure and food insecure households, we regrouped food secure and mildly food insecure households under *food secure* and moderately and severely food insecure households under *food insecure* households. Then, the following steps are followed for the computation of HFIAS.

Table 7: Calculating HFIAS

Household categories	Description	Sum
Food secured	Sum of respondents who replied 'No' to Q1 and 'Yes' to Q1a with frequency 1	1+1a (F1)

Household categories	Description	Sum
Mildly food insecure	Sum of respondents who replied 'Yes' to Q1 with frequencies of 2 and 3 for Q1a + 'Yes' to Q2 with all frequencies for Q2a + 'Yes' to Q3 and Q4 with frequency 1 for Q3a & Q4a.	1a (F2 & F3) + 2a (F1, F2 & F3) +3a (F1)+4a (F1)
Moderately food insecure	Sum of respondents who replied 'Yes' to Q3 & Q4 with frequencies 2 & 3 + 'Yes' to Q5 & Q6 with frequencies 1 & 2	Q3a (F2 & F3) + Q4a (F2 & F3) +Q5a (F1 & F2) + Q6a (F1 & F2)
Severely food insecure	Sum of respondents who replied 'Yes' to Q5 & Q6 with frequency 3 + Q7, Q8 & Q9 with all frequencies (F1 + F2 & F3)	Q5a (F3) + Q6a (F3) + Q7a (F1 + F2 + F3) + Q8a (F1 + F2 + F3) and Q9a (F1 + F2 + F3)

Source: Coates *et al*. (2007)

A farther systematic categorization of survey respondents into food secure and insecure households was to clearly speak about the proportion of respondents into food secure or insecure households. For this particular purpose, the following regrouping was made based on Coates *et al*. (2007) recommendation.

Table 8: Classifying respondents into food secure or insecure households

Category of households	Description
Food secure and mildly food insecure households	Sum of respondents replied 'No' to Q1 and 'Yes' to Q1a with frequency 1 and the sum of respondents replied 'Yes' to Q1 with frequencies of 2 and 3 for Q1a + 'Yes' to Q2 with all frequencies for Q2a + 'Yes' to Q3 and Q4 with frequency 1 for Q3a and Q4a.
Food insecure households (moderately and severely food insecure households)	Sum of respondents who replied 'Yes' to Q3 & Q4 with frequencies 2 & 3 + 'Yes' to Q5 & Q6 with frequencies 1 & 2 plus the sum of respondents who replied 'Yes' to Q5 & Q6 with frequency 3 + Q7, Q8 & Q9 with all frequencies (F1 + F2 & F3)

ii. The questionnaire for MAHFP, data collection methods, respondents and data analysis followed Swindale and Bilinsky (2006) recommendations. Available literature (for example, Getachew *et al*. 2018), have also classified households into (1) least food insecure (able to

satisfy their food requirement for 10–12 months) (2) moderately food insecure (able to satisfy their food needs for 7–9 months); and (3) most food insecure (cannot feed their household members for 6 and more months of the year).

iii. Habte and Krawinkel (2016) noted that HDDS refers to the number of food groups consumed by households over a reference period that can range from 24 hours (one day) to 15 days though the most common ranges from 1-3 days and in some cases, it can be 7 days. Habte and Krawinkel further noted that using the 12 food groups as Swindale and Bilinsky (2006) studied gives greater option than other types of classifications such as FAO (2006) and Kenndey (2009). Furthermore, FAO (2013) noted the absence of established cut off points in terms of number of food groups consumed within a reference period of time to specify sufficient or insufficient dietary diversity for HDDS. On the other hand, Muriel *et al*. (2019) utilized the following methods to compute and interpret HDDS findings.

$$\text{HDDS j} = \sum_{i=1}^{12} groupij; \text{ Where j= the household and i=the food group}$$

$$\text{Average HDDS} = \frac{\sum_{i=i}^{n} HDDSj}{n}; \text{ Where n = total number of households}$$

2.4. Results and discussions

i) Socio-demographic characteristics of the respondents

Among the 492 respondents, 43 (8.7%) were youth (i.e., 24-29 years old) and the remaining 449 (91.3%) were adults (30-49 years old). Smaller proportion (4.5%) of the SHG members were youth as compared to the proportion (13.1%) of respondents not organized in the SHGs. In addition, majority of the rural respondents (60.5%) were youth as compared to 39.5% of the urban respondents (Table 9).

Table 9: Demographic characteristics of the survey respondents (#, %)

Residence	Unit	Age				Marital status				Education				PWD[20]	
		Youth		Adult		Married		Others		Illiterate		Literate			
		Organized	Not organized	Organized	Not organized	Organized	Not organized	Organized	Not organized	Organized	Not organized	Organized	Not organized	Organized	Not organized
Rural (n=246)	#	11	112	15	108	92	77	31	46	52	75	71	48	6	3
	%	9	91	12	87.8	75	62.6	25	37.4	42.3	61.0	57.7	39.0	5	2.4
Urban (n=246)	#	0	124	17	105	54	61	70	61	34	37	90	85	5	3
	%	0	100	14	85.4	43.5	50	56.5	50	27.4	30.3	72.6	69.7	4	2.5
Total (N=492)	#	11	236	32	213	146	138	101	107	86	112	161	133	11	6
	%	4.5	95	13	87	59	56.3	41	43.7	34.8	45.7	65.2	54.3	4.5	2.4

Source: Survey data, Nov-Dec/2021

Furthermore, an average of 57.7% of the respondents was married (i.e., living with spouses), whereas 42.3% were divorced (18.1%), widowed (18.5%), separated (3%), and never married (2.6%). The proportion of married women was greater in rural areas ((92+77)/246*100 = 68.7%) than in urban areas ((54+61)/246*100 = 46.7%). This indicates that a larger proportion of urban residents had multiple burdens as single mothers than the rural respondents. The proportion of married respondents organized and not organized in SHGs was similar (59 and 56% respectively).

[20] PWD refers to persons with certain disabilities that would include hearing and visual impairments, persons who have movement difficulties, limitations on their hands, mental and emotion.

Educationally, an average of 60% (N = 492) of the respondents had some form of literacy (i.e., able to read, write and compute basic mathematics in Amharic language), while nearly 40% of them were illiterates who were unable to read, write, or compute basic arithmetic. The proportion of literate SHG members was greater (65.2%) than the proportion of respondents not organized in the SHG (54.3%). A key informant from Facilitator for Change[21] indicated that SHG members had adult literacy program for six months. This adult literacy program has improved the reading, writing and computing skills of women organized in the SHGs. Furthermore, 71% of the urban respondents (n = 246) were literate as compared to 48.4% of the rural respondents. These findings indicate the importance of access to education and training as important vehicle of change.

The average household size of the study respondents was 3.7 people. The household size of SHG members was 3.6 and the size of not-organised households was 4.1. An independent samples t-test was run to check whether there is statistically significant difference between the means of the household size of respondents organized and not organized in the SHGs. The test result (*t282=.514, p=.607)* revealed that there is no statistically significant difference between the means of household size of respondents organized and not organized in the SHG. According to CSA (2016), the average number of persons in rural and urban households in Ethiopia was 3.5 and 4.9 respectively. Compared with this national survey, the family size of both organized and not organized respondents in rural and urban areas was relatively smaller. However, the current finding shows larger household size in rural areas than urban areas unlike the national survey report.

In terms of disability, 17 (3.5%) of the respondents had difficulty of walking, holding materials, or hearing. A higher proportion of the SHG members (4.5%) had disabilities as compared to the respondents not organized in SHGs (2.4%).

ii) Household food security status of the study participants

a) Household food security status as measured by HFIAS

The HFIAS findings revealed that 23.7% of the total study respondents and 25.7% of the SHG members were food secured as presented in Table 10.

[21] Facilitator for Change is a local NGO that supports the SHGA in the study areas.

Table 10: Food security status of households organized and not organized in SHGs

Categories of respondents	Food secure		Mildly food insecure		Moderately food insecure		Severely food insecure	
	#	%	#	%	#	%	#	%
All respondents	387	23.7	395	24.2	659	40.4	189	11.6
Organized respondents	212	25.7	298	36.1	257	31.1	59	7.1
Not organized	175	16.9	328	31.7	402	38.8	130	12.6

As compared to the average 23.7%, households organized in the SHG had better food security status during the research period. Furthermore, better proportion (25.7%) of respondents organized in SHG was food secured than the proportion (16.9%) of respondent who were not organized in SHGs. Conversely, the least proportion of severely food insecure households (7.1%) was SHG members as compared to the respondents not organized in SHGs (12.6%). These findings strongly support the focus group discussants' understanding and belief that SHGA has improved the household food security, women's general wellbeing and children's situations. Discussants organized in SHGs in Debre-Markos City and Gozamin District reported that household income, women's employment and income generation capacities are advanced because of the internal lending system and business trainings provided for them. These self-assertions are supported by the quantitative data collected on household food security situation.

If someone sums up and broadly categorizes food secured and mildly food insecure households as food secured households and the remaining two (i.e., moderately and severely food insecure households) as food insecure households as Maxwell *et al*. (2013) did to simplify the understanding, 61.7% of the organized and 48.6% of the not organized respondents were food secure at the time of this study. The size of food secured households organized in SHGs is higher than the size of food secured households who were not organized. This tells policy makers, practitioners and scholars that SHGA has the power to empower the disempowered and contribute to food security at household and overall sustainable development at regional and national levels. More importantly, it tells about the importance of relying on internal capacities and human resources for sustainable development than external dependence. If external aid was used as a strategy to address the food insecurity situation of the organized households, SHG

members were the most destitute, vulnerable and food insecure households when they were established. But, the dream of household food security was attained through internal means.

Therefore, the HFIAS household food insecurity measurement has revealed that households organized in SHGs were relatively better food secured than households who were not organized in the SHGs. This was validated by logistic regression.

Table 11: Logistic regression on household food security status

Variables in the Equation						
					95% CI-OR	
	B	SE	P	OR	LL	UL
Are you a member of SHG? (1)	0.885	0.231	0.000	2.423	1.541	3.809
Constant	0.916	0.141	0.000	2.500		

The binary logistic regression output revealed a statistically significant difference in household food security status of organized and not organized respondents: X^2 (1, N=492) =15.428, *p=0.000.* Furthermore, the output showed a positive odds ratio of 2.423 at 95% CI: 1.541-3.809. This output, and the lower and upper limits that do not include zero in between, indicate that respondents that were organized in SHG were 2.423 times more likely to be food secure as compared to those respondents who were not organized in the SHG approach. The receiver operating curve (Fig. 4) has cemented this regression output.

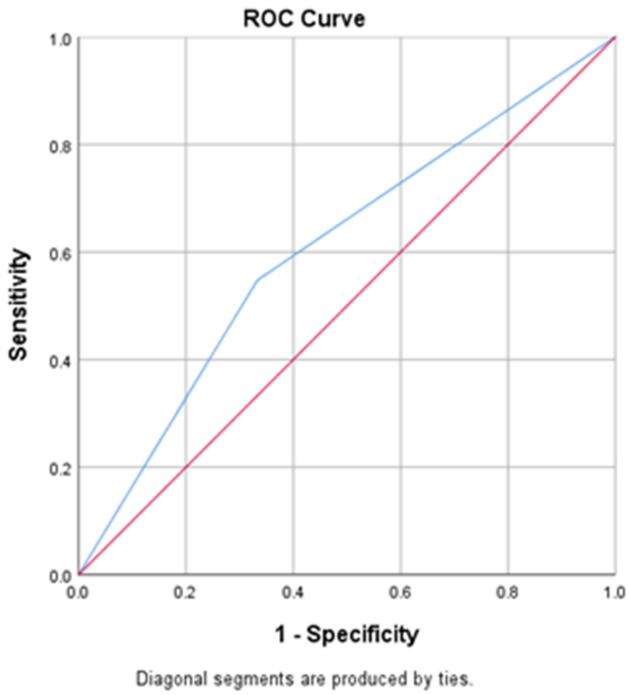


Figure 4: Receiver operating characteristic (ROC) curve

As Figure 4 depicted, the ROC curve (blue line) is above the diagonal line indicating a positive association between SHG membership and household food security status. The curve measures the sensitivity. And this strong sensitivity indicates the likelihood that the model forecasts a positive result for an observation when actually the result is positive. The area under the curve (0.607) speaks about the sensitivity of the model (which ranges from 0-1). This means that the model has correctly predicted that 60.7% of the respondents organized in the SHGs fall in the food secured category. All-in-all, the different food security measurements provided consistent and complementary results.

Other research findings computed using HFIAS in other rural and urban localities of Ethiopia reported household food security of 62% (Malla *et al*. 2017), 90.2% (Daniel & Gerber, 2017) and 53.9% (Foziya *et al*. 2018). While research finding by Daniel and Gerber (2017) looks much higher than the finding of this paper, results of Foziya *et al*. (2018) and Malla *et al*. (2017) were close to the results of this study. However, it is difficult to compare the findings of this paper with such existing evidences because 1) the respondents of this study were women only while others used women and men respondents as household heads and/or head and spouse together 2) the timing of data collection for this study was an extension of the lean period (Nov-Dec/2022)

while existing research data (Daniel and Gerber, 2017; Malla *et al*. 2017) were collected in post-harvest season 3) some of the researches (Foziya *et al*. 2018) were based on people visiting health facility for treatment and 4) previous researches classified households as food secured and mildly, moderately and severely food insecure unlike the binary classification (i.e., food secure and food insecure) used in this paper.

b) Household food security status as measured by MAHFP

On average, survey respondents had 6.3 months of adequate household food provisioning 12 months prior to the research. According to Swindale and Bilinsky (2006), least food insecure households are those who satisfied their food requirements for 10-12 months, moderately food insecure households meet their food needs for 7-9 months and the most food insecure are households that meet their food needs for 6 months or smaller within year. The household survey finding has shown that there were households who did not experience food shortage at all as well as households who faced food shortage throughout the 12 months. Accordingly, the MAHFP findings are organized in Table 12.

Table 12: MAHFP results and implications

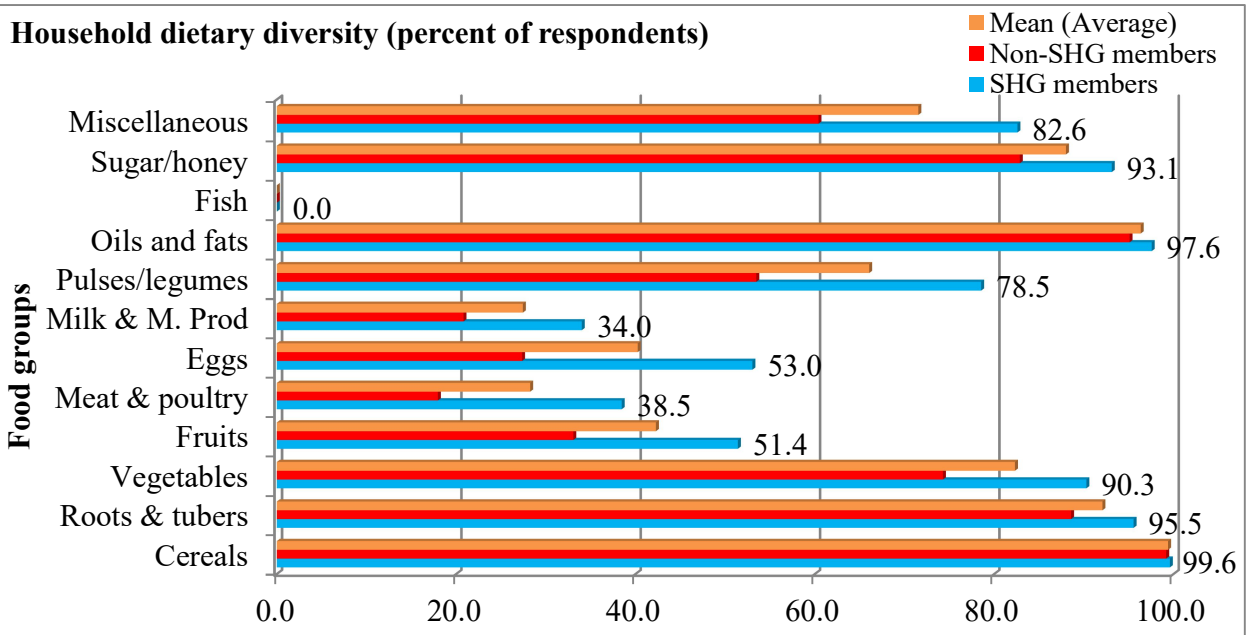
Respondent category	Months of Adequate Household Food Provisioning							
	10-12 months		7-9 month		0-6 months		Total	
	Number	%	Number	%	Number	%	Number	%
SHG members	106	42.9	135	54.7	6	2.4	247	100
Not organized in SHGs	92	37.6	139	56.7	14	5.7	245	100
Total	**198**	**40.2**	**274**	**55.7**	**20**	**4.1**	**492**	**100**

The finding has revealed that about 40.2% and 4.1% of the survey respondents were least and most food insecure in their respective order in the past 12 months prior to this study. When organized and not organized households were compared, relatively greater proportion of organized respondents (42.9%) was least food insecure as compared to the not organized respondents (37.6%). Conversely, relatively smaller proportion (2.4%) of organized respondents were most food insecure than the respondents who were not organized in the SHGs (5.7%). Moreover, about 54.7% of the organized and 56.7% of the not organized respondents were moderately food insecure during the study period (Nov-Dec/2021). The findings indicated that

relatively better proportion of organized (42.9%) respondents than not organized respondents (37.8%) had more stable household food security in the past 12 months prior to this study.

c) Household food security status as measured by HDDS

According to Pangaribowo *et al*. (2013), HDDS is a useful tool to measure household food security status from access dimension where the units of analysis were the households. As HDDS measures correlate with measures of food consumption, food access, caloric availability, improved nutritional status. HDDS is a meaningful measurement for food and nutrition security. The findings of the household survey data are presented in Fig. 5.



	Cereals	Roots & tubers	Vegetables	Fruits	Meat & poultry	Eggs	Milk & M. Prod	Pulses /legumes	Oils and fats	Fish	Sugar /honey	Miscellaneous
Mean (Average)	99.4	92.1	82.3	42.3	28.3	40.2	27.4	66.1	96.3	0.0	88.0	71.5
Non-SHG members	99.2	88.6	74.3	33.1	18.0	27.3	20.8	53.5	95.1	0.0	82.9	60.4
SHG members	99.6	95.5	90.3	51.4	38.5	53.0	34.0	78.5	97.6	0.0	93.1	82.6

Figure 5: Dietary diversity of the study households

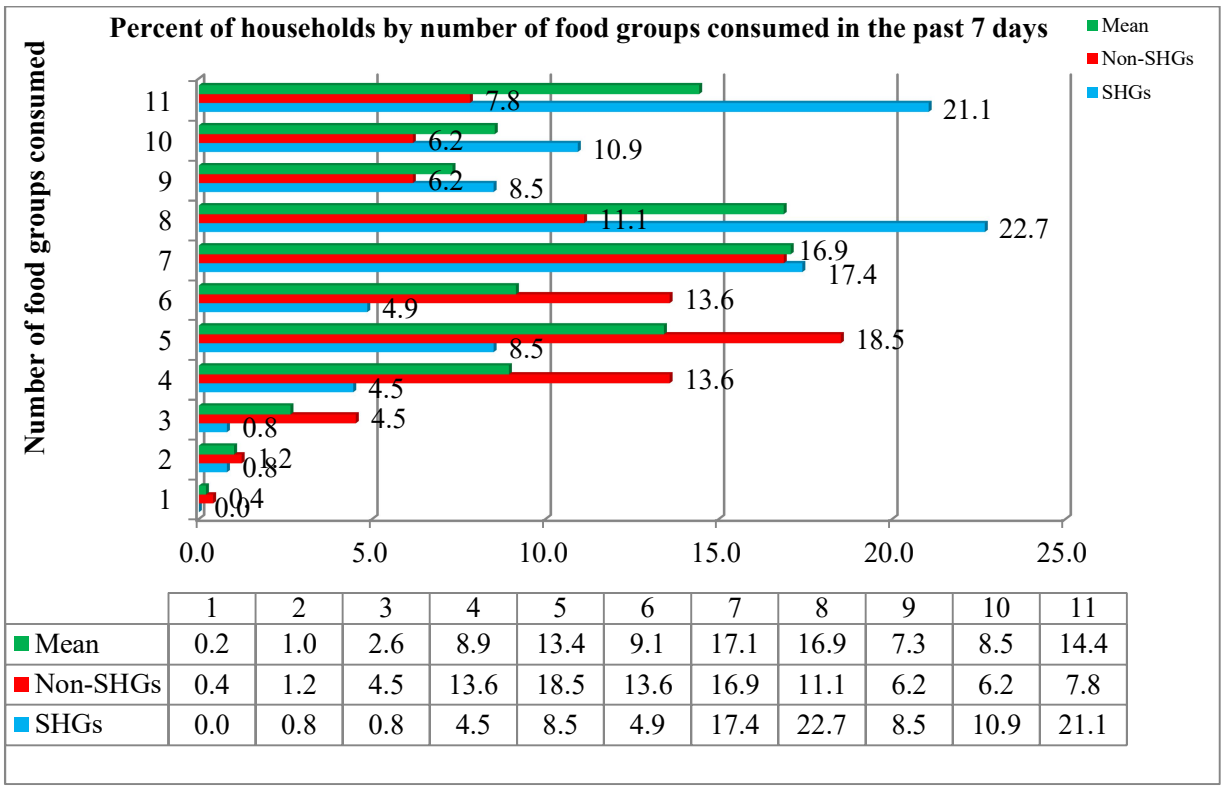
The finding showed that almost all (99%) of the study respondents consumed cereals in the past 7 days prior to the data collection time for this research. Furthermore, roots/tubers (92%), vegetables (82%), oils/fats (96%), sweets (88%) and condiments 71.5%) were among the most commonly consumed food groups. Fruits (51.4% of the organized and 33.1% not organized) and

animal products such as meat and poultry (28.3%), eggs (40.2%), milk and milk products (27.4%) were among the least consumed food groups. Furthermore, none of the research households consumed fish in the past 7 days which would indicate that Fish is not a food type commonly available in the study areas and a culture in the ordinary community such as poor and marginalized households. This indicates that majority of the respondents were consuming staple foods prepared from cereals, vegetables, roots and tubers, oils/fats, condiments and pulses. None staple foods such as animal products were consumed by relatively smaller proportion of the respondents. Relatively low cultural preference and/or economic capacity of households to consume animal products would have nutritional implications among the research respondents. Researches (like Lofgren & Speckmann, 1979) indicated that meat, eggs and dairy products contribute $\geq$ 60% to the protein, calcium, phosphorus, riboflavin and vitamin $B_{1, 2 \& 6}$ contents of human diet. Schonfeldt *et al*. (2013) also noted that foodstuffs that are rich in animal products are helpful to get healthy diets which are beneficial to fight inadequate nourishment.

In addition to the household food consumption by food groups, data were analyzed by the proportion of respondents who consumed the number of food groups. The minimum and maximum number of food groups consumed was 1 and 11 with an average of 7.3 HDDS. The focus group discussions held with organized and not organized respondents further elaborated the ingredients of each meal the family is often served. Accordingly, there were at least about a mix of five food groups a family can consume in a meal. For example, they stated that 'Shiro'[22] sauce and 'Injera' is common staple food prepared from cereals, legumes/nuts/pulses, red pepper, onion, oil and other condiments. For rural households, there is a common local drink called 'Tella'[23] which is prepared mainly from barley, maize and/or millet. Roasted barley, chickpea, 'Gibto'[24] and other cereals and legumes are also commonly served as snacks. Although it was found rare in rural areas, urban respondents commonly use tea and wheat bread for breakfasts which have sweets like sugar. Hence, those respondents who reported the consumption of few food groups such as one or two were not supported by focus group discussants indicating that the study area population consumes more variety of foods.

[22] Shiro is one of the most common sauces in the study commonly prepared from peas, beans, chickpea and other legumes and condiments
[23] Tella is a local beer prepared from barley, wheat, millet and other ingredients depending on the local context
[24] Gibto is a legume used to prepare local liquor, roasted and soaked in water and served as snack.

The proportion of organized and not organized respondents who consumed 7 food groups was nearly the same. Although not linear, the proportion of not organized respondents' increases with decreasing number of food groups while the proportion of organized respondents increases with increasing number of food groups consumed by the research households.



	1	2	3	4	5	6	7	8	9	10	11
Mean	0.2	1.0	2.6	8.9	13.4	9.1	17.1	16.9	7.3	8.5	14.4
Non-SHGs	0.4	1.2	4.5	13.6	18.5	13.6	16.9	11.1	6.2	6.2	7.8
SHGs	0.0	0.8	0.8	4.5	8.5	4.9	17.4	22.7	8.5	10.9	21.1

Figure 6: Percentage of respondents by number of food groups consumed

Based on Muriel *et al.* (2019), a third (33%) of the top two HDDS had consumed eight (8) food groups and the second two top HDDS had consumed six (6) food groups. Accordingly, households that had HDDS $\geq$ 8 were considered as households who had suitable variety of foods, 6$\leq$HDDS<8 as households with acceptable variety and HDDS < 6 were those households with little or low dietary variety of foods. Based on this classification, the research finding has revealed that 47% of the survey households were having suitable or high level food variety whereas 26.2% had acceptable and the remaining 26.8% had low variety of foods as depicted in Table 13.

Table 13: Household dietary diversity score and its classification

Classifications	Number	%
Suitable (HDDS ≥ 8)	231	47.0
Acceptable (6≤HDDS<8)	129	26.2
Little/low (<6)	132	26.8
Total	492	100

When disaggregated by study groups, about 63.2% of the organized and 31.3% of not organized respondent households had suitable dietary diversity (see Fig. 7).

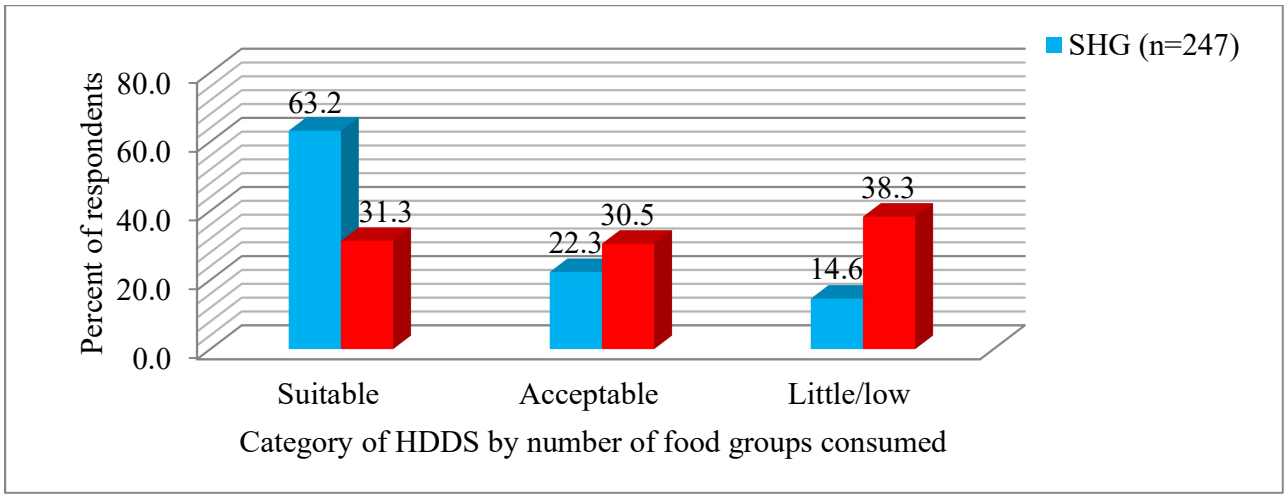


Figure 7: Classification of HDDS

Similarly, about 22.3% and 30.5% of the organized and not organized respondents had acceptable level of household food diversity during the study period whereas about 38.3% of the households that were not organized had low household food diversity as compared to the 14.6% SHG households.

Field observations to selected SHG members in Debre-Markos City and Gozamin district have also witnessed that SHG members have constructed and/or renewed their homes and purchased sizeable small animals such as hens, sheep and goats. These are important assets for the women and households that can be sold, or held in collateral when necessary to advance their planned development endeavors.

Report by CSA and WFP (2019) showed that nationally, 54% of the Ethiopian households consumed four or more food groups out of the seven[25] food groups. The same report disclosed that 83% of households from Amhara region consumed four or more food groups in the same period. Compared with this report, the percentage of SHG respondents participated in this study that had suitable and acceptable access to diversified food groups was relatively higher (85.43%). The number of food groups consumed by SHG respondents would indicate the good performance of the study groups as compared to the regional performances partly because 1) the data sources of the CSA and WFP report was the 2016 Welfare Monitoring Survey where the survey data was collected from randomly selected households as opposed to women organized in the SHG who were the most destitute community groups before they are organized in the SHGs and 2) the food groups included in this study were 12 as compared to seven food groups used for the CSA and WFP report. Furthermore, the relatively lower proportion of respondents not organized in SHGs (61.73%) that consumed suitable and acceptable food variety would indicate the relationship between SHGA and household food security. This would further imply that the SHG approach has the capacity to narrow the food security gap in a community.

2.5. Conclusions

The aim of this paper was to explore the food security status of households organized and not organized in the SHGs in Debre-markos city and Gozamin district of Ethiopia.

Pertinent quantitative and qualitative data were collected from 492 randomly selected respondents. HFIAS, MAHFP, HDDs and binary logistic regression statistical techniques were applied to measure the prevalence of household food security, dietary diversity and stability of household food security status. Using the binary logistic regression model, relationship between membership in SHG and household food security was established.

The HFIAS, MAHFP and HDDS outputs revealed that households organized in SHGs were in better food security situation (61.7%, 43% food self-sufficient for 10-12 months and 85.5% with suitable and acceptable dietary diversity) than households who were not organized (48.6%, 37.6% food self-sufficient for 10-12 months and 61.8% with suitable and acceptable dietary diversity). The food security status of organized and not organized respondents was statistically

[25] The seven food groups are starch, pulses, vegetables, fruits, meat, dairy, oil & fat and sugar

significantly different at $p<0.001$. The area under the curve of the receiver operating characteristic (0.607) well predicted the probability of SHG respondents to fall in the food security category when indeed the 60.7% of them were food secured. Research findings computed using HFIAS in other parts of the country reported household food security at 62% (Malla *et al*. 2017), 90.2% (Daniel and Gerber, 2017) and 53.9% (Foziya *et al*. 2018). While research finding by Daniel and Gerber (2017) looks much higher than the finding of this paper, results of Foziya *et al*. (2018) and Malla *et al*. (2017) were close to the results of this study. However, all of the findings were difficult to compare with the findings of this study fundamentally because their research respondents were not organized in the self-help groups. Other things that made comparison difficult were that 1) they used HFIAS as continuous variable thereby used other statistical tools than binary logistic regression and 2) they classified households as food secured and mildly, moderately and severely food insecure unlike the binary classification (i.e., food secure and food insecure) used in this paper. There was similar limitation to compare the HDDS results of this paper with CSA and WFP (2019) report on HDDS because of data sources and number of food groups used. Hence, comparing the findings of this paper with existing sources was felt less relevant for two basic reasons: 1) methods used and 2) types of respondents. Overall, it can be said that membership in SHG approach has established positive association with household food security.

2.6. Recommendations

Based on the findings, it is suggested that researches on the implications and contributions of the self-help group approach to household food security that will consider self-help groups operating in other regions of Ethiopia and the availability, access, utilization and stability pillars of food security would provide a more comprehensive evidence about the impact of the SHG approach on household food security.

CHAPTER THREE: DETERMINANTS OF FOOD SECURITY

3.0. Abstract

The study investigated the food security determinants of households that were organized and not organized in self-help groups in Debre-Markos City and Gozamin District, Amhara region, Northwest Ethiopia. Survey data were collected from 492 households. Household Food Insecurity Access Scale, binary logistic regression and descriptive statistics were used to analyze the data. It was found that age, marriage, education, membership in health insurance, training on business development and harmful practices, child protection and gender equality, access to loans from self-help groups and availability of small ruminants were statistically significantly associated with the household food security of self-help group members. Specifically, access to business plan development, business management, opening and managing income generating activities, financial management, harmful traditional practices, gender equality trainings and access to simple, affordable and flexible business loan from SHGs were exclusively statistically significantly contributing factors for organized households. On the other hand, place of residence, age, membership in community health insurance, borrowing from relatives and microfinance institutions, ownership of appliances, ownership of production tools, and rings of different type were statistically significantly associated with the household food security of households that were not organized in SHGs. In conclusion, the finding revealed that households organized in self-help groups have a higher number and exclusive food security determinants than households that were not organized in the SHGs. The finding suggests that the activities of the self-help group approach have equipped group members with crucial business knowledge, attitude, skill and financial management disciplines that are useful for household food security and wellbeing of the households.

Keywords: Self-Help Group, Self-Help Group Approach, women, sustainable development, food security, determinants

3.1. Introduction

3.1.1. Background to Global Hunger and Food Insecurity

Among the seventeen Sustainable Development Goals for 2030, attaining zero hunger, food security, and advanced nutrition is worth mentioning (UN, 2015). However, food security has remained a global concern even after eight years of the implementation of the plan. While it can be defined as a situation when all people have physical, economic, and social access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences at all times to live active and healthy lives (FAO, 1996), attaining the required level of food security has remained a challenge. The same report revealed that in Africa, countries like the Democratic Republic of the Congo, Burundi, Somalia, South Sudan, Libya, Chad, the Central African Republic, and Madagascar were the most hunger-affected countries in the past six reporting years. FAO (2017) reported that the prevalence of food insecurity in Sub-Saharan Africa and Eastern Africa stood at 26 and 28%, based on 2016 data.

Sources such as FAO, ECA, and AUC (2021) have noted the unaffordability of healthy diets and economic slowdowns and downturns as critical drivers of hunger that amplify the negative impacts of violent conflict, drought, and climate change. Other reports further listed inequality,

climate change, covid-19 pandemic, conflict, war, forced displacement, migration and inappropriate policies, and inadequate resource allocation as the main causes of hunger, extreme poverty, and food insecurity (IFPRI, Welthungerhilfe, and Concern Worldwide, 2017-2022).

IFPRI, Concern Worldwide and Welthungerhilfe (2017) and Welthungerhilfe and Concern Worldwide (2018–2022) reports clearly indicate that child wasting, child stunting, and child mortality in Ethiopia are at alarming levels (Fig, 8).

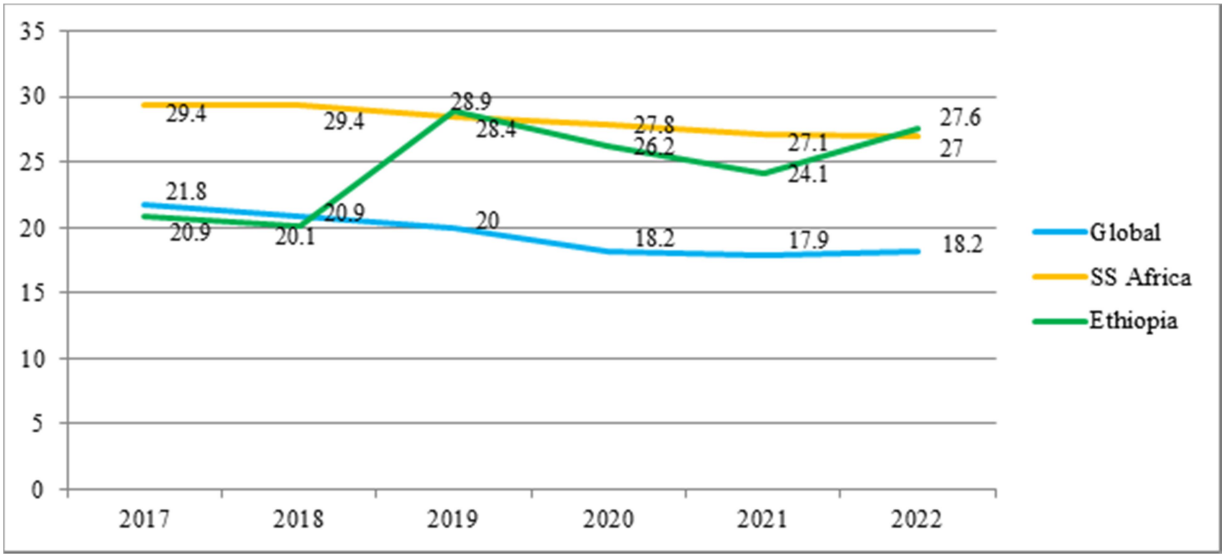


Figure 8: Six Years Trends in GHI

Sources: IFPRI *et al*. (2017) and Welthungerhilfe and Concern Worldwide (2018-2022) reports

Generally, progress toward the 2030 goal of ending hunger is challenged by multiple factors. According to Welthungerhilfe and Concern Worldwide (2021), Ethiopia is one of the African countries (such as South Sudan, Nigeria, Somalia, and the Central Republic of Africa) that are experiencing the most severe hunger situation in the reporting year. The drivers of the hunger crisis are too many and context-specific. It is important to understand that global, continental, and regional reports can obscure the ground realities, and worst conditions can be expected at household and individual levels. The implication is that countries like Ethiopia and their most vulnerable community groups, such as women and children, would experience the worst scenarios. Furthermore, the reports are indicative of the fate of the next generations as the hunger indices are constructed from undernourishment, child wasting, child stunting, and child mortality that show the negative impact of the hunger situation on children's physical, mental, cognitive, and emotional development.

3.1.2. Sustainable development and the concept of sustainability

Development can be defined from social, economic and environmental perspectives and conceived as people-centered, participatory and bottom-up endeavor that stimulates the social, economic, cultural and political lives of people (Schafer *et al*. 2011). According to UN (1987), all human beings have the right to development and everyone has the right to participate in, contribute to and enjoy economic, social, cultural and political development outcomes. Furthermore, Todaro and Smith (2015) assert that development encompasses social, cultural, political, economic and psychological advancements and denounce the definition of development using economic indicators. On the other hand, Enders and Remig (2015) noted that sustainable development centers on human development, encompasses inter-generational and intra-generational justice, considers global outlooks and pays attention to the conservation of nature. The same source shines on the necessity of talking about sustainable development within human rights[26] lens as mutually reinforcing and conditioning components.

Similar to sustainable development, sustainable livelihood is high in the global agenda (Srinivas, 2021) and is one of the terms being used in development studies. Given the possible variations among writers, Chambers and Conway (1991), Scoones (2009), Valdés-Rodríguez and Pérez-Vázquez (2011) explained sustainable livelihoods as a combined effort and outcome of capabilities, assets and activities required for a means of living that can cope with and recover from stress and shocks that provide sustainable opportunities for future generations across the globe.

While Adato and Meinzen-Dick (2002) have listed human, social, financial, natural and physical livelihood assets, FHI 360 (2014) has included political asset as the sixth component. In a similar fashion, the concept of empowerment centers itself on reducing, at best removing, inequalities of all kinds and Ghanghas (2018) has explained empowerment as a growing economic, social and spiritual capability of individuals and communities. For some scholars (like Mandal, 2013), the concept of empowerment has replaced the term ‘development’ in the present day discourse. As Mokta (2014), empowerment can be cognitive, psychological, economic, political, and physical.

[26] Fundamental human rights issues would include freedom from discrimination, injustice, and threats to personal security. It would also mean the freedom of participation, the realization of individual potential, and decent work without exploitation

3.1.3. Household food security determinants in the body of existing literatures

Household food security determinants are too many, culture-sensitive, and natural, acquired, and change over time and space. According to FHI 360 (2014), household food security determinants can be classified as human, physical, social, financial, natural, and political assets. The same source has noted that each domain is composed of several elements that are suitable for intervention and measurement. Household food security determinants would have a positive or negative influence depending on the geographic, socio-cultural, political, economic, and other contexts of the study population.

Food security determinants at global and continental/regional levels. FAO (2017) reported that in Africa, Sub-Sahara, and Eastern Africa, food insecurity drivers include conflict, climate change, and climate variability. In the rural context where agricultural activities are typical sources of household income and the mainstay of household food security, Osarfo, Senadza, and Nketiah-Amponsah (2016) have noted that non-farm economic activities in South-East Asia and Northern Ghana are crucial sources of income and household food security. The study has indicated that diversifying household income through farm and non-farm economic activities increases employment, household income, and, indirectly, agricultural production and productivity. The findings of Mutiah and Istiqomah (2017) revealed that the educational level of the household head and household income have positive associations with food security while family size has a negative effect on household food security in rural Indonesia while age was found as having no significant role on food security in urban Indonesia. Dagnaygebaw (2019) has also noted that causes of food insecurity in Africa and other third-world nations include natural factors like drought, extreme weather events, pests, livestock diseases and climate change and human-induced such as conflicts, political instability, corruption, rapid population growth, and aid dependence.

Food security determinants in the context of Ethiopia. In Ethiopia, several studies have identified several explanatory variables that determine household food security. For example, Mequanent *et al*. (2014) have identified the educational level of the head of the household, household size, dependency ratio, use of agricultural input, and number of oxen the household owned as important household food security determinants in rural Ethiopia. Furthermore, food insecurity is more prevalent in rural Ethiopia than in urban settings (Mequanent *et al*. 2014;

Wondim *et al*. 2022). Other studies indicated that poor soil fertility, shortage of land, drought, farmland degradation, frost attack, low cash income, poor agricultural technologies, inadequate agricultural extension services, low labor productivity, and poor social and/or infrastructure are household food security obstacles (Dagnaygebaw, 2019; Mequanent *et al*. 2014; Tewodros & Fikadu, 2014). These same sources indicated that borrowing from village money lenders, failure to use loans for investment alone, selling crops immediately after harvest, livestock renting out, and disintegrated farming system, high food price, unpredictable and untimely safety net support, a lack of training opportunities, and lack of confidence are significantly affecting household food security in some parts of rural Ethiopia. Tewodros and Fikadu (2014) have further identified off-farm income, access to food aid programs, and the number of contacts with agricultural extension workers as important household food security determinants in rural Ethiopia.

In urban Ethiopia, drivers that positively influence household food security include the educational status of the household head, household income from different sources like gifts and remittances, household income, and ownership of a bank account, while variables like age and household size negatively influence household food security (Ejigayhu & Abdi-Khalil, 2013). In addition to their diversity in type, similar types of household food security determinants do not influence household food security in the same direction or with the same strength. For instance, Mequanent *et al*. (2014) argued that, as the age of the household head increases, the probability of the household falling into the food secure category increases, while Dagnaygebaw (2019) has found a negative relationship between age and household food security. The issue would be the extent to which the characteristics of some of the variables such as age and household size were elaborated in the study process so that confounding and lurking variables are addressed during the construction of data collection tools and data analysis stages. For example, one can gain experience with increasing age. In such cases, there would be a positive relationship between the productive age group and household food security while this may not continue as productivity would deteriorate with aging because of losses of energy and motivation. Similarly, dependency ratio and household food security can demonstrate a better correlation than household size and household food security. If the largest proportion of the household members is active and productively engaged in economic activities, then, a positive association is expected between household size and food security, otherwise not.

3.1.4. The self-help group approach in Ethiopia

In order to address the root causes of hunger, food insecurity, and other forms of vulnerability, development practitioners design and roll out different intervention models. The SHGA is one of such models. Furthermore, there are studies that identify the roles of different empowerment approaches, such as SHGA and other savings and credit groups, in household food security.

Savings and credit groups are among the grassroots community-based organizations that provide special attention to saving and credit services for their members. The shared belief of the approach is that lack of savings and inability to access affordable credit services for gainful investments are among the fundamental drivers of human misery. Multiple saving groups can operate in a given country or locality, following their own purposes and principles. The Rotating Saving and Credit Association can be considered one of the oldest and most common types of such groups. Its members can be neighboring women and men (mixed) or family members, members pool a fixed amount of saving within the agreed cycle of time and all members take the sum of money they saved turn-by-turn using the lottery method. Alternatively, bid and decision methods can be applied in the group (Saqib *et al*. 2017). This resembles Ethiopia's centuries-old Iqub method (ILO, 2009). Saving and Internal Lending Communities is the other form of saving group (15-30 persons) which provides saving and internal lending services (3-6 months) for its self-selected members. One life cycle could be 8-12 months. For this cycle, the field agent is assigned by the promoting organization that can be certified as Private Service Provider afterward. The maximum amount of loan a member can get is equal to the amount of money a member has saved. By the end of the cycle, group members can share-out their savings and profit accrued from interest (CRS, 2010, 2012 & 2019). Saving and Credit Cooperative is another form of saving group providing saving, credit, and insurance services for its members. Conceived in 1846 in Germany, the society primarily aims at meeting the saving and credit needs of its members. They can also grow into formal banks (Getachew, 2006). In addition to members' savings, they can take loans from formal financial sources for their members. Members are often mixed and unlimited in number. They can be formally recognized as cooperative societies, affiliated with the government (Mekonnen, 2021; Pasara *et al*. 2021), or remain independent (Getachew, 2006). Iqub is a quasi-formal financial institution in Ethiopia where lottery and auction methods are applicable, depending on members' agreement, for a member to get the sum

of money she or he saved. In Iqub, members share the premium amount of savings and the sum of money they saved when their turn comes.

Started in 1991 in Niger, the Village Saving and Loan Association is an association of 10–25 self-selected mixed members who want to create complementary credit access for the members who may or may not have access to formal financial intermediaries due to various reasons. Saving (which is in the form of the share-purchase system) and interest-bearing credit services are time-bound (9-12 months). By the end of the term, there is a share-out which would lead to group liquidation. Members have the right to loan accession that amounts to a maximum of threefold of their savings. Loan terms range from 12 to 26 weeks. Meetings of the association are regular for the first cycle (9-12 months) and meeting frequency may reduce afterward. Following the end of the first cycle, new members may join, founding members may leave, or the group may disintegrate. Field officers assist members to organize themselves, enhancing awareness, and building self-confidence and their resources (Allen & Staehle, 2007; VSL Associates Ltd, 2022). Village Economic and Social Association, on the other hand, is a group of Productive Safety Net Program beneficiaries in Ethiopia that aim at assisting and empowering the members to develop a saving culture and get access to credit services from their savings. They have facilitators and thrive on graduating members from the productive safety net program. It focuses on financial literacy, women empowerment, nutrition, livelihoods, aspirations, and graduation readiness (Zegeye *et al*. 2018).

The SHGA takes a slightly different approach to saving groups and an increasingly holistic approach to women's empowerment. The theoretical background of self-help, which is the focus of this study, traces back to the 1920s humanistic psychology. Humanistic psychology believes that individuals have an inherent drive towards self-actualization, the process of comprehending and expressing their own competencies and motivations. It believes that human beings have the ability to make choices, set goals to pursue, are aware that they can create future events, and seek meaning, value, and creativity. A very good facilitator is required as a change engine within this theoretical framework. A very good facilitator is one who is flexible, considers learning a changing experience, and allows others to observe, think, and react the way they do. They can assist people in becoming self-aware and mindful, thereby changing their state of mind from a set of reactions to healthier and more productive self-awareness and thoughtful actions. The

theory further ascertains that a person has the capacity to help him or herself if her or his thinking is reoriented positively. For this reorientation, a trained therapist who unconditionally accepts the person in a problematic situation is necessary (Bland & DeRobertis, 2019). Ranjithab (2016) and Sail and Kumbharjuvenkar (2013) wrote that SHG is an important tool for the social, economic, political, and cultural empowerment of marginalized women, thereby emancipating them from cultural and traditional beliefs that disproportionately drag, harm, and disempower them.

Globally, there are scientific shreds of evidence that show the significance of the SHGA for the psychological, social, and economic empowerment of the excluded community members and, thereby, their household food security (Atieno, 2017; Biscaye *et al*. 2014; Borkman, 1976; Das, 2016; Harris, Anderson, & Gugerty, 2014; Kumar *et al*. 2018; Rathinam & Akudugu, 2014; Sundaram, 2012). Specifically, organizing poor women in SHGs has significant implications for gender equality, women's asset acquisition, investment in children's education and health, domestic saving and investment, improved household living conditions, members' primary and reproductive healthcare, agricultural productivity, women's decision-making power, subjective wellbeing, and autonomy (Atieno, 2017; Rawat, 2014; Seibel, 2001; Shirisha *et al*. 2017; Swamy & Tulasimala, 2010).

Although the number of destitute women organized in SHGA, the amount of saving, internal lending, the number of new jobs created for themselves, family members, and others, and the geographic coverage where SHGA is being implemented in Ethiopia are all growing (CoSAP, 2017; DAG, 2014; Gebre, 2015; ODI, 2016; Tearfund, 2015), the researcher was not able to find adequate scientific evidence that explored the determinants of food security among households organized and not organized in SHGs in Ethiopia in general and in the study area socio-economic context in particular. On the other hand, the principal researcher (or the candidate) is one of the pioneering SHGA experts in Ethiopia with extensive national and international exposures since 2002, as well as an expert who conducted various evaluative studies, developed training materials, and engaged in advisory work in the field. Such exposures helped the researcher observe the contributions of the SHGA to household income and women's empowerment and its challenges in scaling up and institutionalizing the approach in Ethiopia. Hence, these reasons necessitate this study with the objective of investigating the determinants of

food security among households organized and not organized in the SHGs in Ethiopia, with a particular focus on Debre-Markos City and Gozamin district. Accordingly, the research question that guided this research is *what are the factors that determine the food security status of households organized and not organized in self-help groups*?

3.2. Conceptual and Analytical Framework

According to Bland and DeRobertis (2019), human beings are conscious, goal-oriented, search for meaning, are able to select responsibly and supersede the sum of their parts. KNH (2014) has elaborated that if poor, vulnerable, and voiceless individuals are organized into homogenous groups, they can gain incredible strengths, become aware of their rights, and claim them. It is believed that organizing the poor, vulnerable, powerless, and voiceless into homogenous groups and assisting them to analyze their individual, sociocultural, physical, natural, economic, and political contexts can help them gain impetus toward food security. These premises are theorized as household food security determinants (Fig. 9).

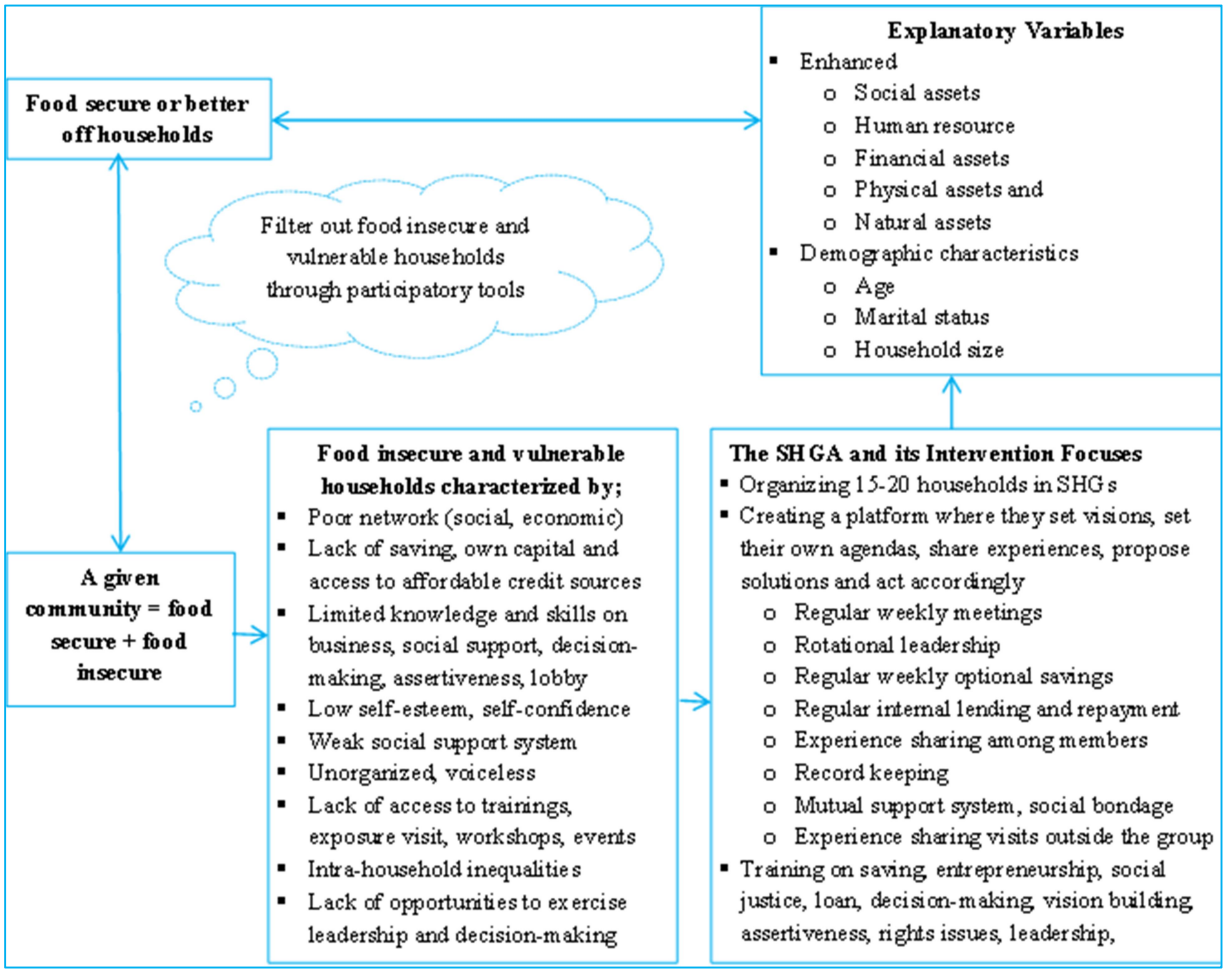


Figure 9: The household food security determinants framework

Based on this conceptual and analytical framework, the food security determinants of households organized in SHGs include the five selected livelihood assets (i.e., human, financial, social, physical, and natural), demographic characteristics (such as age, marital status, and household size), and place of residence. The activities of the SHGA, such as pieces of training, regular discussion meetings, rotational leadership, savings and access to internal lending, participation in the social support system, acquisition of physical and natural assets (enhanced purchasing power), control over resources, and making investment decisions, positively impact on these livelihood assets. The assignment of trained facilitators is also at the center of the approach. These supports lead to intermediate outcomes such as SHG members' enhanced awareness about the self, social, economic, and political environments; a strengthened social support system; a developed culture of regular saving and capital formation; better entrepreneurship skills; access

to affordable loans (from internal sources); women's meaningful participation and engagement in economic activities; improved household income; and asset ownership and decision-making.

3.3. Methodology

3.3.1. Data sources and data collection methods

Quantitative data were collected from 492 households (247 organized and 245 not organized women in SHGs) through household survey method.

3.3.2. Data analysis

The household food security status of the study households was measured by HFIAS, which was re-coded as a dichotomous response variable (0=food insecure and 1=food secure). The calculations, meanings, and interpretations of HFIAS are adopted from Coates *et al*. (2007) and household categorization into food secure and food insecure are presented in Tables 6, 7 and 8. Based on the dichotomous response variable, survey data were analyzed using binary logistic regression. As Gujarati (1995) wrote, the binary logistic regression model can be represented as:

$Li\text{-}In(pi/(1-pi)=\beta 0+\beta iXi$ ---------- (3)

Where pi = the probability that Y = 0 (that a given household is not food secured);

1-Pi = the probability that Y = 1 (that given household is food secured);

Li = the natural log of the odds ratio or logit;

β0 = the intercept or the value of the log odds ratio, Pi/(1-Pi) when explanatory variable is zero;

βi = the slope that measures the change in L (logit) for a unit change in explanatory variables (Xi); Xi=lists of explanatory variables included in the study.

3.4. Results and Discussions

Before running the binary logistic regression, multicollinearity among the independent variables was checked, and there was no multicollinearity. Following this, omnibus tests of model coefficients, Hosmer and Lemeshow tests, and a contingency table for Hosmer and Lemeshow test were used to check the goodness of fit of the model. All have demonstrated that the model significantly describes the data; significant improvements in the model fit were observed after the predictor variables were added to it as compared to the null model; and the contingency table shows a fairly equal distribution among the expected and observed frequencies. The model explained 77.2% (Nagelkerke R^2) and 67% (Nagelkerke R^2) of the variance in the dependent

variable of organized and not organized respondents, respectively. It has also correctly classified 97.2% and 87.4% of the organized and not organized respondents, respectively. In this same table, the sensitivity (true positive rate) was 99.5% and 93.5% for organized and not organized respondent categories, respectively. Furthermore, the model was statistically significant at $\square^2$ (36, N = 247) = 139.13, *p<.001* for SHGs and $\square^2$ (36, N = 245) = 104.21, *p<.001* for the respondents that were not organized in SHGs, suggesting that the model could distinguish between food secure and food insecure households.

The predictor variables included in the model were demographic variables such as age, marital status, and place of residence (Ejigayehu & Abdi-Khalil, 2013; Mequanent *et al*. 2014; Wondim *et al*. 2022) and livelihood assets like social, human, financial, physical, and natural resources (FHI 360, 2014).

The binary logistics regression model was applied to examine whether or not the independent variables were associated with the likelihood of household food security (Table 14). Thirty-six independent variables that were supposed to have effects on household food security in the study area were included in the model. Among them, 13 variables (i.e., place of residence, age, marital status, educational status, family health, membership of community health insurance, training on business plan preparation and income-generating activities, business record keeping, harmful traditional practices and gender equality, and access to a loan for consumption, and ownership of small ruminants) were statistically significant determinants of food security for SHG members.

Table 14 Logistics regression output for household food security determinants

Respondents organized in SHGs							**Not organized in SHGs**					
Predictor variables					95% CI-OR						95% CI-OR	
	B	S.E	*p*	OR	LL	UL	B	S.E	*p*	OR	LL	UL
Place of residence(1)	-5.94	2.49	0.017	0.003	0.00	0.34	-3.81	1.74	0.028	0.022	0.00	0.67
Age	0.32	0.16	0.040	1.379	1.02	1.87	-0.15	0.06	0.019	0.860	0.76	0.98
Marital status (1)	.541	.212	0.011	.719	1.13	2.60	0.36	0.77	0.645	1.429	0.31	6.52
Education	1.34	0.58	0.021	3.826	1.22	11.9	-0.13	0.31	0.663	0.874	0.48	1.60
Health (1)	-3.38	1.35	0.013	0.034	.002	0.48	0.45	0.91	0.622	1.565	0.26	9.26
Membership in HI (1)	3.25	1.23	0.008	25.86	2.32	288	1.82	0.86	0.033	6.194	1.16	33.17
Training on IGA (1)	5.85	2.68	0.029	347.2	1.81	665	2.11	1.47	0.152	8.241	0.46	147.6
Business training (1)	-7.89	3.18	0.013	0.000	0.00	0.19	-0.9	1.08	0.430	0.426	0.05	3.54

Respondents organized in SHGs							Not organized in SHGs					
Predictor variables					95% CI-OR						95% CI-OR	
	B	S.E	*p*	OR	LL	UL	B	S.E	*p*	OR	LL	UL
Access to training[27] (1)	8.76	3.42	0.010	6399	7.86	523	-1.4	1.09	0.200	0.246	0.03	2.09
Consumption loan(1)	-2.88	1.45	0.047	0.056	.003	0.96	-2.2	1.46	0.132	0.111	0.01	1.94
Loan for IGAs (1)	-2.63	2.85	0.355	0.072	.000	19.1	-1.0	1.06	0.329	0.356	0.05	2.84
Loan from SHG (1)	3.29	1.45	0.023	26.75	1.56	458	0.46	1.24	0.711	1.584	0.14	18.04
Loan from relative (1)	-0.23	1.47	0.877	0.797	0.05	14.3	-5.8	1.95	0.003	0.003	0.00	0.13
Land ownership (1)	-1.62	1.96	0.408	0.198	.004	9.19	0.78	1.78	0.662	2.175	0.07	71.28
Cows/heifers	-0.32	1.55	0.835	0.723	0.04	15.1	0.09	0.62	0.885	1.094	0.32	3.701
Equines	-0.19	1.78	0.912	0.822	0.03	26.7	1.33	1.13	0.238	3.790	0.42	34.64
Small ruminants	0.81	0.41	0.049	2.240	1.00	4.99	0.09	0.32	0.772	1.098	0.59	2.06
Small animals	-0.19	0.19	0.316	0.831	0.58	1.19	0.26	0.18	0.145	1.291	0.92	1.82
Commercial trees	-0.00	0.001	0.614	0.999	0.99	1.00	0.00	0.00	0.784	1.000	0.99	1.00
Bee-hives (1)	-0.45	2.20	0.839	0.639	.009	47.7	1.49	1.85	0.421	4.442	0.12	167.3
Appliances (1)	0.83	1.28	0.516	2.300	0.19	28.4	3.23	1.09	0.003	25.20	2.94	216.1
Tool & equipment (1)	0.98	1.44	0.496	2.659	0.16	44.3	-4.6	1.66	0.006	0.010	0.00	0.26
Rings, necklace (1)	-1.22	1.19	0.308	0.296	0.03	3.08	3.00	1.35	0.026	20.17	1.44	281.6
Constant	-8.08	7.34	0.271	0.000			11.3	4.02	0.005	7842		

a. Variable(s) entered on step 1: Place of residence, How old are you?, What is your marital status?, What is your educational status?, HHS_ALL, In the past one year (2013 EC), was there any sick person from the family?, Are you (and your family) a member of community health insurance?, Are you a member of Idir, Mahber and other social groups and networks?, Are you a member of Iqub, SACCO/RuSACCO and other economic and business groups and networks?, Are you a member of village or Kebele women associations, leagues, development groups and other gender-based or similar groups and associations?, Do you have regular meetings with group and association members, friends, and/or peers?, Have you ever led a meeting or workshop?, Are you trained on saving culture and loan management?, Are you trained on business plan development, IGA selection and management?, Are you trained on recording business expenses and profits?, Are you trained on harmful practices, child protection and gender equality?, Are you trained on vision building and goal setting?, As far as you remember, for how many days have you participated in short-term trainings other than your membership meeting?, Did you borrow money for HH consumption in the past three years (2011-13 EC)?, Did you borrow money to invest on IGAs in the past three years (2011-2013 EC)?, Did you borrow from your SHG/Iqub/Idir/SACCO?, Did you borrow from village money lender?, Did you borrow from relatives/friends?, Did you borrow from microfinance?, Do you have land?, How many cows and heifers do you have?, Do you have oxen and young male calves for plowing?, How many equines (horses, donkeys, and mules) do you have?, How many small ruminant animals like sheep and goat do you and your family have? We have ----- small animals (like hen, cock, chicken), How many commercial trees like eucalyptus do you and your family have?, Do you have modern/traditional colonies/bee-hives?, Do you have electric appliances like TV, Radio, cookers, Refrigerator?, Do you have household and agricultural tools and equipment for rent?, Do you have ear rings, rings, bracelets, necklaces, etc.? Do you have mobile phone?

Source: Own survey, Nov-Dec/2021

[27] Trainings on gender equality and harmful traditional practices

Among those 13 statistically significant household food security determinant factors, age, marital status, educational status, membership in community health insurance, training on business plan preparation, income-generating activities, harmful traditional practices, and gender equality, SHG membership and ownership of small ruminants like sheep and goats were positively associated with the household food security condition of households organized in the SHGs. This means that about 22.2% (8/36) of the variables entered in the model had positive and statistically significant association with household food security of respondents organized in the SHGs. For example, the likelihood of the household food security of middle-aged respondents is 1.379 times better than the likelihood of the food security situation of younger and elder respondents (= 0.32) at 95% CI-OR 1.02-1.87 (*p =.046)*.

In this study, the age range of respondents was 24 to 49 years old. The food security situation of respondents whose ages are between 31 and 36 was 100%, while the food security status of other respondents fluctuated as observed in the chi-square test. This indicates a kind of bell-shaped structure where the food security situation of younger and older respondents is lower than that of middle-aged respondents. Furthermore, the marital status of women organized in the SHGs was found to be a statistically significant determinant of household food security. The OR of 0.719 of marital status tells us that the likelihood of the household food security status of married women was 1.719 times more likely than unmarried (i.e., do not have husbands), divorced, widowed, and/or separated respondents.

According to focus group discussants, there were many unmarried women before they were organized in the SHGs. Many of them were widows, divorcees and generally single. In addition, the data collected from not organized women revealed that about 44% (107) of them were not in the marriage bond as compared to 41% of organized respondents who were in the marriage bond. It is when they are organized in the SHGs thereby become active participants in economic and social activities that they are able to marry. This indicates that being organized in the SHGs helped women to explore, develop and utilize their development potentials thereby become attractive to men counterparts and strongly contribute to their household food security. The SHGA helps them to optimally utilize their labor, skills and naturally given age related strengths.

Similarly, respondents' educational status was positively associated with their household food security. The finding has revealed that educated (i.e., who can read, write and compute basic

arithmetic in Amharic language) respondents were 3.826 times more likely to be food secure than illiterate respondents at 1.34, 95% CI-OR 1.22-11.9 (*p =.021).* The prevalence of household food security consistently increases from illiteracy to primary school education (i.e., grades 1-4), shows a slight reduction at junior level education (i.e., grades 5-8), and shoots up at secondary school education levels (i.e., grades 9–12), where 100% of the respondents who attained this grade level were food secure. Hence, there is a general indication that the likelihood of household food security is higher among literate households than the food security situation of respondents with lower levels of education. However, the effect of college and university-level education on household food security was not included in the study because there were no college or university-graduate research participants.

For households that were organized in the SHGs, membership in community health insurance statistically significantly (*p =.008*) determines their household food security at =3.25 and 95% CI-OR 2.32-288. It was also found that study participant households that were in the community health insurance system was 25.86 times more likely to be food secure than study households that were not members of the community health insurance system. Furthermore, access to pieces of training on business plan development, business management, and income-generating activities (*p =.029*, =5.85, 95% CI-OR 1.81-665*)* was positively related to the household food security situation of the trained respondents. The study found that the household food security situation of trained respondents was 347.2 times more likely than the food security situation of untrained study participants. Similarly, training on harmful traditional practices, child protection, and gender equality (*p =.010*, =8.76, 95% CI-OR 7.86–523) was positively related to the household food security situation of the trained respondents. Trained respondents were about 640 times more likely to be food secure than untrained participants. On the other hand, SHG membership and thereby access to business loans from one's group have statistically significantly (*p =.023)* contributed to household food security at =3.29, 95% CI-OR 1.56-458. The finding has revealed that respondents who have access to loans from their SHGs are 26.75 times more likely to be food secure than respondents who do not have such credit access. Finally, households that had small ruminants were 2.24 times more likely to be food secure than households without small ruminants at =.81, 95% CI-OR 1.00-4.99.

However, place of residence, sickness, training on business recording, and access to consumption loans were statistically significantly negatively related to the household food security situation of respondents organized in SHGs. With a β value of -5.94 and OR 0.003 at 95% CI-OR 0.00-0.34, the household food security situation of SHG members (*p =.017*) was inversely related to their urban residence (i.e., living in Debre-Markos City). That means that SHG member households living in urban areas are more likely to be food insecure than households living in rural areas. Alternatively, the study finding can be interpreted as meaning that *the food security status of urban respondents would be 0.003 times less likely as compared to rural respondents*. The chi-square test result has shown that about 95.1% of the rural and 76.6% of the urban respondents organized in the SHGs were food secure. Furthermore, sickness in the family member was negatively associated with household food security (=-3.38, 95% CI-OR .002-.480) indicating that families with healthy members were 0.034 times more likely to be food secure than families with sick members. On top of this, respondents believe that access to consumption loans was negatively associated with household food security (p =.047) at =-2.88, 95% CI-OR .003-.96. They responded that households that had access to consumption loans were 0.056 times less likely to be food secure than households that did not have access to consumption loans. Although the difference seems marginal as the CI-OR does not contain one, the *p-value* is 0.047 and the OR is 0.056; SHG members perceive that consumption is not a good idea for household food security. The chi-square test result has indicated that about 97% of the respondents who did not have access to consumption loans were food secure as compared to 61.5% of the respondents who had access to consumption loans.

With regards to households that were not organized in the SHGs, membership in community health insurance, ownership of electric appliances, and having different ornaments like ear and finger rings were positively associated with their household food security status, whereas the place of residence, age, loans from relatives and friends, loans from microfinance institutions, and rentable agricultural and other materials were negatively related to their household food security status. The finding revealed that about 8.33% (3/36) of the tested variables has positive and statistically significant relationship with household food security of respondents not organized in the SHGs.

Some of the statistically significant contributors to household food security are acquired through the SHGA. For instance, access to business plan development, business management, income-generating activities, harmful traditional practices, and gender equality trainings, SHG membership and access to business loans from one's group have positively and statistically significantly contributed to the household food security of respondents organized in the SHGs. Conversely, most of these household food security variables did not show positive and statistically significant impact on the household food security of respondents who were not organized in the SHGs. Therefore, the research findings suggest that the newly introduced knowledge, work, relationship and financial management attitude, skill and moral courage through the SHG approach as well as the simple, affordable and flexible access to business and income generating loans are critical household food security variables for households organized in the SHGs. Hence, organizing vulnerable neighborhood women in the SHGs and equipping them with the impactful knowledge, attitudes, skills and moral courage can statistically significantly contribute to the household food security and overall wellbeing of the households.

Households that were not organized in the SHGs and who are living in urban area (i.e., Debre-Markos City) were 0.022 times less likely to be food secure than rural residents of the same category at β value of -3.81 and 95% CI-OR 0.00-0.67. In other words, respondents that were not organized in the SHGs and who were living in rural areas were 45.45 (1/0.022) times more likely to be food secure than their urban counterparts. Furthermore, when the ages of respondents who were not organized in SHGs increase, there is a likelihood of decreasing in their household food security situation at β value of -0.15, OR 0.860, and 95% CI-OR 0.76-0.98. Respondents between 24 and 27 years old were 100% food secure, while the food security situation of respondents aged above 27 years old was decreasing, though not consistently.

Furthermore, the household food security status of respondents that were not organized in SHGs had access to loans from relatives and friends was 0.003 less likely to be food secure than respondents without loans from relatives and friends at β value of -5.8 and 95% CI-OR 0.00-0.13 (which does not contain one). In addition, respondents that were not organized in SHGs who had access to loans from microfinance institutions were 0.040 times less likely to be food secure than households who did not have access to microfinance loans at β -3.2 and 95% CI-OR 0.00-0.49. Finally, organized households that have rentable agricultural and other materials were 0.010

times less likely to be food secure than respondents who have no rentable materials at β -4.6 and 95% CI-OR 0.00-0.26. Here, it is observed that the differences are marginal across all food security determinant variables. To show the marginality of the differences, a chi-square test was run to show the counts and percentages clearly. For example, the chi-square test result shows that households who received loans from friends and relatives were 67.1% food secure as compared to 67.6% of the respondents who did not receive loans from such sources, and only about 56.3% of the respondents who had access to loans from microfinance institutions were food secure as compared to 78.5% of the food secure respondents without loans from microfinance institutions.

Attempts are also made to discuss the findings of this study against previous studies. Previous studies (e.g., Dagnaygebaw, 2019; Ejigayhu & Abdi-Khalil, 2013; Mequanent *et al*. 2014; Tewodros & Fikadu, 2014) reported that educational status, off-farm income, access to food aid programs, and agricultural extension service were statistically significantly supports household food security, while age was not a statistically significant food security determinant. These same sources have further highlighted that borrowing from village money lenders; consumption loans, a lack of training opportunities, and a lack of self-confidence were the variables that statistically significantly affected food security. Atieno (2017) has also found that SHGA helps people to accumulate household assets, thereby promoting food security. Some of these findings support the findings of the SHG respondents who participated in this study, such as education, access to loans from within the SHG fund, loans for income-generating activities, and training opportunities on selected topics such as entrepreneurship and social aspects of food security like harmful traditional practices, child protection, and gender equality. Similarly, consumption loans were identified as a variable that affects food security negatively in both the reviewed materials and in this study. Nevertheless, food security variables in the previous studies were less congruent with the findings of respondents that were not organized in the SHGs. The reason would be that, as Atieno (2017) has clearly noted, SHGA has brought many food security variables into a basket and tries to address many of the food security bottlenecks, while households not organized in SHGs do not have this privilege. The finding has revealed that the SHGA has not only contributed to the household food security situation, but also to an overarching sustainable development outcomes by empowering the powerless persons, especially women. This is in line with existing sustainable development and human rights' literatures (Adato & Meinzen-Dick, 2002; Scoones, 2009; Srinivas, 2021; Todaro & Smith, 2015). These

sources stressed on the contribution of empowering[28] people through various mechanisms to substantially boost sustainable development and ensure human rights issues. Findings from these sources stressed on the importance of reducing, at best removing, inequalities and ensuring inclusiveness as a strategic focus to cultivate sustainable development.

There are also some findings in the reviewed materials that contradict the findings of the current study. For example, we found that urban residence was negatively associated with household food security, while Dagnaygebaw (2019) reported that the prevalence of food insecurity is more severe in rural areas of Ethiopia than in urban places. Finding such contradictory findings among several studies would be common for various reasons. More importantly, the respondents of this study are households organized and not organized in the SHGs, while the respondents of many other studies reviewed here focus on not organized households, mostly residing in rural areas. Furthermore, the independent variables researchers hypothesized would vary, and so do the findings.

3.5. Conclusions

This paper investigated household food security determinants among households' organized and not organized in self-help groups in Debre-Markos City and Gozamin district of Ethiopia. Quantitative data were collected from 492 randomly selected respondents (247 self-help group members and 245 respondents not organized in self-help groups) using a structured household survey. Qualitative data were also collected from purposefully selected key informants and focus group discussants. A relevant body of literature was also reviewed throughout the study. Household Food Insecurity Access Scale, descriptive statistics, chi-square, and binary logistic regression techniques were used to analyze the survey data.

The study finding revealed that the number of household food security determinant variables (eight) of households organized in the SHGs was about 2.7 times more than the number of food security determinants (three) of households not organized in self-help groups. It also indicated that variables that were statistically significantly associated with food security of organized households were largely accessed through the SHGA. The study finding hints that the education,

[28] Empowerment can have social, cognitive, spiritual, physical, cultural, political, economic and psychological, individual/group capability, assets and activity dimensions while assets would mean human, social, financial, natural, physical and political/governance/decision-making.

training and exposure opportunities created by the SHGA have assisted organized households to become well aware about, knowledgeable and skillful in terms of saving, investment, productivity, resource utilization and reduced household level inequality. As a showcase, education, membership in health insurance, training on business skills, gender equality, child protection, harmful practices, and loan accession from self-help groups have significantly supported their food security situation with ORs and □-values greater than one. Similarly, electric appliances and membership in health insurance were statistically significantly associated with the food security of households not organized in the self-help groups with ORs and □-values greater than one.

The SHGA focuses on the empowerment of women through education, training, and exposure visits supported by practical experiences. Group members attend their literacy programs mainly because they have to record their weekly meeting minutes, financial transactions and write and read correspondence letters. Pieces of training on saving, internal loan management, harmful traditional practices, child protection and gender equality, business development, and management skills are among the topics that are included in the SHGA training manual (KNH, 2014). Such trainings are important financial and non-financial food security components that advance labor productivity, household incomes, participatory household level decision-making, positive attitude on the need for fair, just, and equitable distribution of food items in the household as intra-household inequality is one of the causes of food insecurity (FAO, IFAD, UNICEF, WFP, and WHO, 2019; Gupta & Vegeline, 2015). These findings converge with previous studies (such as Calves, 2009; Huis *et al*. 2017) that by empowering and engaging destitute women, a self-help group approach has a clear food security pathway. Therefore, predictors statistically significantly and positively associated with household food security would be the outcomes of the approach where the respondents not organized in self-help groups did not have at large. Furthermore, the findings of this study strongly support the basic principles of sustainable development. As the self-help group approach entirely focuses on human capital development through expanded access to education, training and exposures combined with economic, social, community-wide, system and environmental level issues, the approach embedded the mechanisms to ensure sustainability of outcomes. Those empowered women and their family, who are daily enjoying their fruits, would not go back to their miserable life. Instead, they prefer to cooperatively fight for their benefits.

In conclusion, the number and magnitude of food security determinants among self-help groups are the outcomes of the approach as many of them are not observed in households not organized in self-help groups and residing in the same vicinities. This suggests that the self-help group approach and its development philosophy have good mechanisms to address individual, socio-economic, and governance-related food security barriers.

3.6. Recommendations

Based on the findings, it is recommend that development actors shall focus on human development interventions that can sustainably improve individual, household, and community-wide well-being. This is in line with the basic principles of human nature where everyone has development potential that can be unleashed through trainings, education, exposure visits and practices. Empowered and capacitated individuals, households and communities can devise their own mechanisms to escape from food insecurity, misery and vulnerability even when they are in problematic socio-cultural, political, environmental and natural environments.

CHAPTER FOUR: LEVELS AND DIFFERENTIALS OF WOMEN'S DECISION-MAKING

4.0. Abstract

A self-help group approach is one of the women empowerment approaches that specifically target impoverished women. The approach is being implemented in different parts of Ethiopia since 2002 through the support of non-governmental organizations. Thus far, there is a lack of adequate research on the contribution of the self-help group approach to women's decision-making power. Hence, this study examined the decision-making power of women organized and not organized in the self-help groups in Debre-Markos City and Gozamin District, Amhara region. The research design was cross-sectional survey. Data were collected using mobile application from 284 randomly selected women organized in self-help groups (146) and not organized in the self-help groups (138). Women empowerment index was used as an outcome variable, constructed based on a set of empowerment questions. Ordinary Least Square (OLS) regression was used to determine the effect of the main exposure variable (i.e., membership in self-help group) on the outcome variable. The finding has revealed that women organized in self-help groups were able to attain significantly higher scores of empowerment than women who were not organized. The findings imply that self-help group approach as an alternative women empowerment model has huge potential to promote the wellbeing of individuals and households.

Keywords: self-help group, decision-making, empowerment, food security

4.1. Introduction

Self-Help Groups are groups of people that come together to socio-economically support each other. The primary purpose of the groups is to meet their prioritized individual and household needs. Groups have agreed bylaws and accounting systems to manage the group dynamics. Group membership is voluntary and optimum group size ranges from 15-20 members (CoSAP, 2017)[29]. Self-Help Group Approach on the other hand is an approach that aims to socially, economically and politically empower the SHG members. Structurally, SHGA is a tool for women's social, economic, household decision-making, and cultural, and political empowerment (Ranjithab 2016; Sail and Kumbharjuvenkar 2013) and refers to the entire functions of the SHGs, Cluster Level Associations and the Federations. Gebre (2015) has noted that the concepts and principles of the SHGA was introduced to Ethiopia in the 1980s aiming at initiating and advancing the participation and benefits of the poor community groups in the name of *Ras Agez* (which means self-help) though it cannot sustain and adapted to the national and local contexts for unknown reasons (when the new government takes power in 1991, it abandoned the SHGA).

[29] The SHGA in Ethiopia is being implemented by Non-Governmental Organizations (NGOs). COSAP is the Consortium of Self-help group Approach Promoter Organizations. NGOs deploy community facilitator.

There are other approaches in Ethiopia designed to empower the weaker sections of the society. For example, the Rotating Saving and Credit Association (Saqib *et al*. 2017), Saving and Internal Lending Communities (CRS 2010, 2012, 2019), Saving and Credit Cooperatives (Getachew 1996; Mekonnen 2021; Pasara *et al*. 2021), Village Saving and Loan Associations (Allen and Staehle 2007; Allen 2022) and Village Economic and Social Association (Zegeye *et al*. 2018) are worth mentioning. These approaches differ from the SHGA in many ways such as structure, target beneficiary, membership, size of members, type of saving, regular meeting periods and graduation periods and stages.

Globally, there are scientific evidences that show the significance of the SHGA for the psychological, social, cultural, economic, and political empowerment of the excluded community members such as women (Borkman 1976; Sundaram 2012; Biscaye *et al*. 2014; Rathinam and Akudugu 2014; Sail and Kumbharjuvenkar 2013; Ranjithab 2016; Atieno 2017; Kumar, *et al*., 2018; Gaas 2019; Das 2016). Specifically, it is a powerful tool for women's improved decision-making, gender equality, women's asset acquisition, better primary and reproductive healthcare seeking behaviors, subjective wellbeing and autonomy (Seibel 2001; Swamy and Tulasimala 2010; Rawat 2014; Shirisha *et al*. 2017; Atieno 2017).

Evidences on the situation of Ethiopian women show mixed pictures. For example, the United Nations Development Program (UNDP, 2020) indicated that Ethiopia's human development index has increased from 0.292 in 2000 to 0.485 in 2019 (66.1% improvement) while Haregewoin & Emebet (2003) found that the situation of Ethiopian women needs improvement claiming religion and culture as the two major causes for their subordination. The Planning and Development Commission (2018) of Ethiopia believes that the economic growth in Ethiopia did not well reach the poorest sections of the communities, especially women, due to its less inclusiveness and aid-driven nature.

The SHGA was re-introduced into Ethiopia from India in 2002 as an alternative women empowerment, gender equality, and poverty reduction approach. SHGs comprised of 15-20 destitute women identified through participatory rural appraisal methods whose objectives are to psychologically, socio-economically and politically empower the members. SHGA is governed by core principles such as active participation, weekly regular meeting and saving; interest bearing short-term internal lending, rotational leadership and linkage (DAG 2014; Gebre 2015;

CoSAP 2017). In Ethiopia, 32 non-governmental organizations that implement the SHGA are members of the Consortium of Self-help group Approach Promoters (CoSAP), 246,278 women are organized in 13,339 SHGs and have accumulated a total of 246 million Birr capital (CoSAP, 2021). The SHGA in Debre-Markos City was started in 2003 and Gozamin District in 2012. So far, about 1673 destitute mothers (from 864 urban and 809 rural households) in Debre-Markos City and Gozamin District were organized in SHGs (FC 2021).

Attempts were made to explore scientific researches and published materials on the contributions of the SHGA to women empowerment, women's decision-making, general well-being, its limitations and challenges in Ethiopia in general and in the context of the study areas in particular. Though the extensive operational experiences of the principal researcher shed light to observe the contributions of SHGA to women empowerment, supporting such observations with scientific evidences was the biggest shortfall. Specifically, there is dearth of published works that explore the implication of the SHGA to women's decision-making power in the context of study areas. This lack of knowledge-base and scientific evidence on the contributions of the SHGA to women's decision-making is the reason for initiating this research. Hence, the study aims to contribute towards filling this gap and bring the SHGA into the attentions of the scholars, government bodies, and the civil societies. This study has primarily aimed to answer the question "Does membership in self-help group make a difference in women's decision-making?"

4.2. Conceptual and Analytical Frameworks

According to Manuere and Phiri (2018), the concept of empowerment was conceived in the works of Freire (1974) such as the Pedagogy of the Oppressed. The writers viewed empowerment from the perspectives of power over, power to, power with, and power within. The 1980s was a period when rights-based community empowerment approaches were mushroomed worldwide (Entz, 2016). Furthermore, Calves (2009) recognized the contributions of the 1960s and 1980s Feminist movements, the Black Power Movement and Gandhism for the conception and development of empowerment of the powerless and the importance of women's organizations for inclusive and sustainable development.

In the Beijing Platform for Action, United Nations (UN 1995) has put women empowerment as an indispensable pre-condition for social, economic, and political development of nations. Jager and Rohwer (2009) have further elaborated that countries that excluded half or more of their

population (i.e., women and girls) cannot optimally utilize their human talents for sustainable development and well-being.

Empowerment can be defined differently by different organizations and researchers following their objectives and contexts. For instance, Sail and Kumbharjuvenkar (2013) discussed women's empowerment from economic, social, household decision-making, power to protest against social evils, and political dimensions. They defined women empowerment as an interactive process toward creating an enabling environment for women to remove hindrances to meet their needs. Women empowerment is promoted by expanding women's access to education, training, and development (Manuere & Phiri 2018 citing Inglehart and Norris 2003; Inglehart & Wezel 2005). It can be measured by the degree to which women are involved solely or jointly in their household decision-making processes (Lombardini *et al*. 2017), the extent to which women decide on their healthcare (Ewerling *et al*. 2017), and the freedom to independent mobility to attend meetings, visit families, relatives and market places (Sail and Kumbharjuvenkar 2013). This is depicted in Fig. 10.

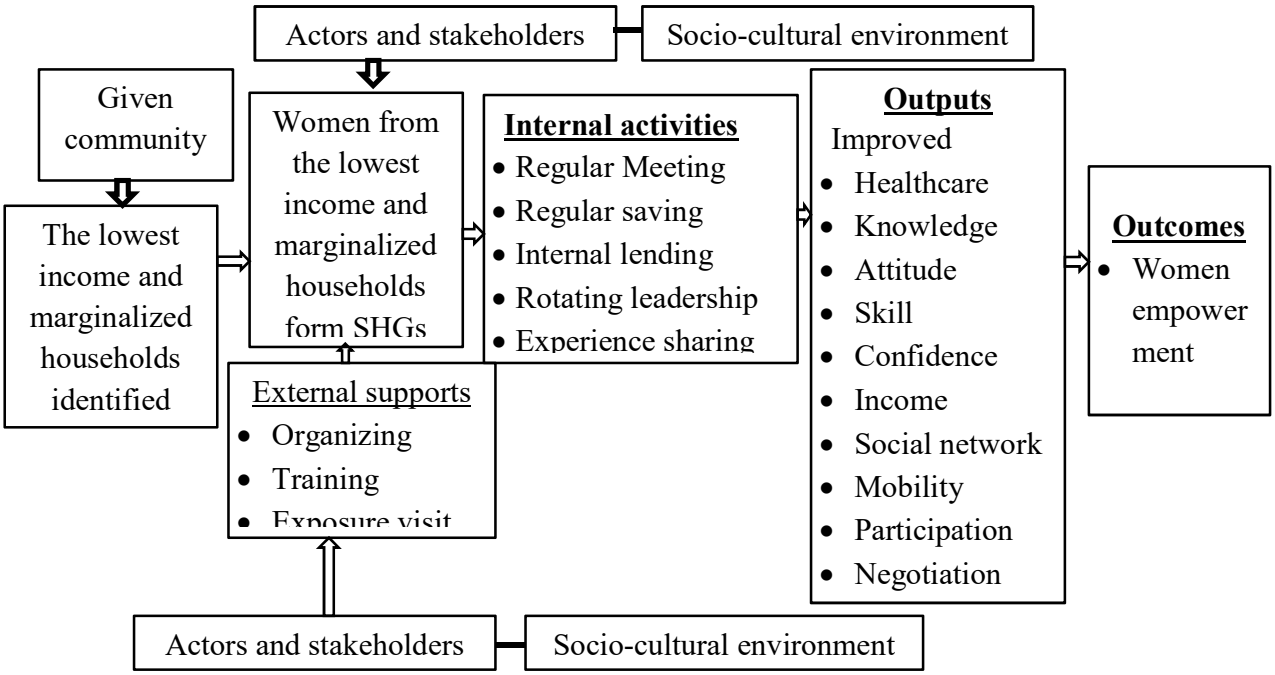


Figure 10**:** Conceptual and analytical framework

Hence, women empowerment can be conceived as a process of engaging women, advancing their awareness, knowledge, capability, and participation aiming not only to tackle prevailing and felt inequalities but also to ensure sustainable well-being through preventing and managing unforeseen vulnerabilities. Henceforth, a model that identifies the most marginalized persons and engages them in their individual, social, economic, and political empowerment processes can address the problem.

4.3. Methodology

Researchers such as Dereje *et al*. (2022) and Amanuel *et al*. (2022) have well noted the importance of using pragmatic philosophy as it has the discretion to choose and use mixed research design, methods, techniques and procedures that best meet their research objective. The research employed quasi-experimental research design and relied on quantitative data collected through structured survey questionnaire. In this research, the SHG members are the experimental and women not organized in the SHGs were the control groups. The study adopted Lemeshow *et al*. (1990) two independent samples determination formula as two independent samples were considered for the study.

$$n_i = \{p_1(1-p_1) + p_2(1-p_2)\}\left(\frac{Z}{E}\right)^2$$

Where
- ni is the required sample size
- p_1 and p_2 are proportions of the successes
- Z is the desired confidence level (1.96)
- E is the margin of error and $P_1=P_2=0.5$

The above formula yields 284 respondents. Accordingly, a random sampling design was employed to select three Kebeles[30] from six Kebeles of Debre-Markos city and three other Kebeles[31] from Gozamin district where SHGA was implemented. Within these selected Kebeles, sampling frames for organized and not organized respondents were prepared. The lists of SHG members were obtained from their book writers and the lists of marginalized women not-organized in the SHGs were obtained through participatory rural appraisal method in partnership with the Federation and cluster level leaders.

Trained data collectors have collected survey data from 284 married women respondents whose age ranges from 24-49 years old using Kobo Toolbox mobile application for the sole purpose of this study. Only married women within their reproductive age were studied because they have husbands who would negotiate and influence their decisions or, at the worst, completely decide alone on behalf of the respondents. Among respondents, 146 were organized in SHGs and 138 were not organized in SHGs.

A structured survey questionnaire comprised of 16 women empowerment indicators at individual and household levels were constructed. The question types were ordinal where 0

[30] Kebele 02, 03 and 06
[31] Aba-Libanos, Enerata and Graram Kebeles

points were accorded for decisions made by the husbands, 1 point for decisions made by the wife and husband jointly, 2 points for decisions made by the respondent woman herself. In order to establish the women empowerment index, however, joint decisions and decisions made by the respondent women were merged so that 0 points were accorded for the absence of a decision by the respondent (or disempowerment) while 1 point was assigned for decisions made by the respondent women solely or jointly with their husbands-empowerment (Kenya National Bureau of Statistics 2020; Lombardini *et al*. 2017; Feiruz and Fanaye 2015; Roy *et al*. 2018). This leads to the existence and use of dummy variables for the data analysis. All questions were given equal weights to simplify the data encoding and analysis as well as to avoid subjective assignment of different weights for different women empowerment indicators (Feiruz and Fanaye 2015; Kenya National Bureau of Statistics 2020; Roy *et al*. 2018).

The women empowerment dimensions for individual and household affairs were extracted and adapted from Roy *et al.* 2018. Two data analysis techniques were applied. The women's decision making power was analyzed based on the women empowerment index value. Ordinal Least Square Regression was used to examine the effects of membership in self-help group, controlling for all possible confounding variables in the model. Multicollinearity among the explanatory variables was checked using the Variance Inflation Factor (VIF), with VIFs > 2.5 indicating significant multicollinearity problem. Other critical assumptions of OLS Regression such as homogeneity and normal distribution were checked and met. The study also used a p-value less than 0.05 and 95% confidence interval for declaration of statistical significance. Dummy variables are also used whenever necessary to compare results.

3.6.1. Data sources and data collection methods

Quantitative women empowerment data were collected from 284 households (146 organized and 138 not organized women in SHGs) through household survey method. The survey questionnaires focused on women's decision-making power on individual and household affairs.

3.6.2. Data analysis

Quantitative data on women's decision-making power were analyzed using women

empowerment indices for individual and household affairs considering 0.8 (80%) empowerment as a cut-off point for adequate empowerment level. In addition, binary and multi-variable statistical techniques are applied to determine the significance of women empowerment variables

4.4. Results and Discussions

4.4.1. Socio-Demographic Status of the Study Participants

About 146 (51%) of the respondents were organized in SHGs and 138 (49%) were not organized in SHGs. In terms of age, 27 (9.5%) were youth (i.e., 24-29 years old) and a majority of them (90.5%) were adults (30-49 years old). The average family size of organized and not organized respondents was 3.6 and 4.1 persons, respectively. In terms of residence, 167 (59%) of them were from the Gozamin district while 117 (41%) were from Debre-Markos City. Regarding respondents' occupation, about 47.2%, 26.8% and 13% of them were engaged in agriculture, service and small trade sectors. The remaining proportions of respondents were engaged in daily labor, manufacturing of local materials and collecting and selling wood and wood products.

According to CSA (2016), the average number of persons in rural and urban households in Ethiopia was 3.5 and 4.9 respectively. Compared with this national survey, the family size of organized and not organized respondents in rural and urban areas was relatively smaller. Educationally, about 65% (n=184) of the respondents had some form of education while 35% were illiterates. The proportion of literate SHG members was greater (69%) than the literacy level of respondents that were not organized in SHGs (60.9%).

4.4.2. The Women Empowerment

4.4.2.1. Women's Decision-Making on Individual Affairs

As displayed in Table 15, the composite Women Empowerment Index (WEI) for individual affairs as well as indices of individual indicators show that SHG members were generally adequately empowered (80%) while respondents that were not organized in SHGs were not (60%).

Table 15: Women empowerment Index for individual affairs

Women empowerment indicators	Organized in SHGs (%)	Not organized in SHGs (%)
Can borrow money from someone other than my husband	70	40
Do not need the permission of my husband to go to the market or another villages alone	50	40
Do not need the permission of my husband to visit relatives and friends alone	60	30
Do not need the permission of my husband to attend meetings of local community groups	60	40
I and my husband decide on where to pass or invest my time	100	90
I and my husband decide on my healthcare (pre-postpartum)	90	80
I and my husband decide whether to be pregnant or not	100	90
I and my husband decide whether to use or not to use the FP method	100	90
Composite index	**80**	**60**

Source: Own survey: Dec/2021

SHG members reached an adequate level of empowerment (80%) in terms of decision-making power on individual affairs. Among the empowerment indicators of individual affairs, they were about 100% empowered in deciding where to pass or invest their time, to be pregnant or not and whether to use a family planning method or not followed by a 90% empowerment level in deciding on their healthcare matters. Overall, SHG members exceed the threshold of adequate empowerment level in four of the eight indicators. However, SHG members were below the threshold of adequate empowerment in deciding to go to the market or other places alone (50%), visiting relatives and friends alone (60%), and borrowing some amount of money other than husbands for personal purposes (70%). This shows that there are areas that need further strengthening. Similarly, respondents that were not organized in SHGs reached or exceeded the 80% adequate empowerment edges in four of the eight indicators on individual affairs. However, respondents not organized in SHGs were not adequately empowered in terms of deciding to go to the market or other places alone (40%), visiting relatives and friends alone (30%), and borrowing some amount of money other than husbands for personal purposes (40%). The disempowerment among organized and not organized respondents happened in similar indicators. This may be associated with the socio-cultural contexts of the study areas. Importantly, the freedom and capacity of respondents that were not organized in SHGs to borrow some amount of money other than their husbands

for personal purposes was very limited (50% below the threshold and 40% below their SHG counterparts). Perhaps, SHG respondents have the privilege to borrow some amount of money in their groups without asking permission of their husbands while respondents that were not organized in SHGs have no such privileges.

While respondents' engagement in decisions related to their health and time utilization was very high, their decision on independent mobility was limited, especially for respondents that were not organized. Though SHG respondents had a good level of freedom (70%) to borrow some amount of money for personal uses other than their husbands, the decision-making power of respondents that were not organized in SHGs on this same matter was 40%. Coupled with their limited mobility, this gap constrains their engagement in productive and income-generating activities thereby limiting their contribution to their household food security.

Attempts were also made to search and review empirical evidences around these findings. Some studies conducted outside Ethiopia (e.g., Nithyanandhan and Mansor 2015; Roy *et al*. 2018) have noted that the mobility, social interaction, control over intra-household decision making and access to and control over resources of women organized in the SHGs was statistically significant ($p<.01$) after three years of receiving trainings, participating in exposure visits and SHGs meetings. These sources have also noted that SHG leaders surpass the women empowerment threshold of 0.8 while ordinary members are unable to touch this empowerment cutoff point. However, these studies are based on the 'before' and 'after' SHG membership so that they did not compare women organized in SHGs and not organized.

Government reports in Ethiopia indicate that women empowerment is improving over time in the country. For example, the Ethiopian Public Health Institute (2019) has reported that the highest contraceptive prevalence rate at national level (50%) is found in Amhara national regional state and about 28% of reproductive age (15-49) women from the lowest wealth quintile in the region use contraceptive of any kind to limit child bearing or spacing their pregnancies. Furthermore, report has revealed that the proportion of empowered women in terms of making and/or participating in decisions related to how the husband's earnings are spent, women's health, making large household purchases, and visiting family members and relatives grew to 64% in 2019 from 39% in 2005 at national level and has noted that the

proportion of fully empowered women in Amhara region from familial empowerment perspective reached 71% in 2016 (MoWCYA, 2019). At this point, it is important to mention that the sources of evidences for all these reports is the 2016 CSA mini Demographic and Health Survey data based on which other government agencies and their partners computed some sort of statistics on empowerment variables that are the most relevant to mandates of their agencies. Furthermore, in such kind of big national surveys, the inclusion of women organized in the SHGs would remain insignificant so that the findings may not represent women in SHGs. Finally, these reports are produced based on older data collected some 5-6 years before.

Given the differences in the design, composition and size of data sources, study time and data analysis techniques between accessible national empirical evidences and this current study, the findings on common variables (i.e., women's healthcare (focusing on reproductive health), and freedom to visit family members/relatives and friends without prior permission of husbands) provide mixed picture. For example, both women organized in the SHGs and not organized in the SHGs were less empowered (60% and 30% respectively) in terms of freedom of visiting their family members, relatives and friends as compared to the national reports (84%) whereas SHG members and women not organized in the SHGs who participated in this study were better empowered (97% and 87% respectively) in terms of women's healthcare services as compared to accessible empirical findings (81%).

Researchers such as Gebre (2015), Aklilu (2016) and Abda (2016) have found that the SHGA in Ethiopia helps to nurture the culture of democratic participation in decision-making process, majority of the research respondent SHG members (99%) believe that, after joining SHGs, they have meaningfully developed self-confidence on their capacities to improve their own situations as compared to their self-perception before they become SHGs members (13%). These studies have directly addressed women organized in the SHGs. However, the methods followed were different from the methods applied in this study. In addition, the variables of empowerment were not specified clearly in these studies. These factors make direct comparison between existing evidences and the current study less appropriate.

4.4.2.2. Women's Decision-Making on Household Affairs

The second women empowerment dimension included in this study was their decision-making power in their household affairs. In this dimension of empowerment, eight indicators were included. The finding has revealed that, on average, both organized and not organized respondents were better empowered in household decision-making (90% and 70% respectively) than in decision-making powers on individual affairs. Furthermore, respondents organized in SHGs were adequately empowered (90%) while respondents that were not organized in the SHGs were not (70%) adequately empowered in terms of making or influencing their household decisions (Table 16).

Table 16: Women empowerment Index for household affairs

Women empowerment indicators	**Organized in SHG (%)**	**Not organized in SHG (%)**
Do not need the permission of my husband or another family member to purchase food or household items	50	40
I and my husband decide on children's enrolment in school	100	80
I and my husband decide on the use of the money I generated and saved	100	80
I and my husband decide on the use of the assets I accumulated	100	80
I and my husband decide on what foods and drinks to prepare for the family	100	90
I and my husband decide on the purchase of household assets (equipment)	100	80
I and my husband decide on the sale of household big animals	80	60
I and my husband decide on the sale of household small animals	80	70
Composite index	**90**	**70**

Source: Own survey, Dec/2021

While the degrees of involvement in each indicator is different, the involvements of both organized and not organized respondents in decisions related to the types of food and drinks to be prepared for the family, children's enrollment, use of money and assets the respondents have generated and purchase of household assets were very good followed by their involvements in the sale of big and small household animals. SHG respondents scored or exceeded the adequate empowerment level in seven of the eight indicators and respondents

not organized in SHGs attained the same level in five of the eight indicators. However, the involvement of organized and not organized respondents was least (50% and 40% respectively) in the decisions to purchase food and household items for the family. This would have big implications, especially for households that purchase food items from the market or get their food items in exchange for other materials, on household food security because women are the main food preparers and distributers among the family members. They prepare food based on the available quantity and variety of food items which directly determines the quantity and quality of the foods.

4.4.3. The sources of women empowerment in the SHGA

In order to analyze the survey data, binary logistic regression was run. The finding has revealed that women organized in SHGs demonstrated an adequate level of empowerment index in making and/or influencing decisions related to their individual and household affairs. Furthermore, their empowerment index was better than women not organized in the SHGs. By background, SHG members were identified as the most destitute and vulnerable households in their community through participatory wealth ranking and social mapping techniques, among others, before they were organized. It was from the most destitute households that women, who can be wives or heads of households, were voluntarily organized in the SHGs.

As focus group discussants, key informant interviewees, and source materials (KNH, 2014) revealed, SHGs undertake regular weekly meetings, regular savings, internal lending, and record keeping and engage in income-generating activities individually and/or in groups. Among the possible 14 women empowerment variables included in the household survey administered for this particular study, SHG members scored well above 50% in 12 variables while non-SHG members scored slightly higher than 50% in only two of the 14 empowerment variables as presented in Table 5.

Table 17: Factors of women empowerment

	Positive response	
Empowerment variables	SHG member (n=146)	Non-SHG member (n=138)

	No.	%	N0.	%
Attends regular meeting	107	73.3	45	32.6
Leads meetings/workshops	111	76.0	13	9.4
Participates in Bazaar	69	47.3	10	7.2
Trained in saving and loan management	142	97.3	48	34.8
Trained on the business plan and IGA	144	98.6	41	29.7
Trained in recording business expenses and profits	129	88.4	41	29.7
Trained on harmful practices (FGM, gender inequality)	146	100.0	81	58.7
Trained in vision building and goal setting	132	90.4	31	22.5
Regularly saves money in SHG, Iqub, ---	146	100.0	39	28.3
Possessed personal bank saving account	130	89.0	105	76.1
The average amount of money saved in your bank account (ETB)	3,945.04	-	3,173.55	-
Borrowed for household consumption (last 36 months) (ETB)	29	19.9	67	48.6
Borrowed for income-generating activities (last 36 months)	138	94.5	65	47.1
The average amount of money borrowed (all purposes, ETB)	7,325.72	-	9,766.85	-

SHG members scored below 50 in bazaar participation and borrowing money for household consumption purposes whereas, non-SHG members were better at attending training on harmful traditional practices and opening personal bank accounts. The number of SHG members participating in bazaars can be affected by several factors, among which the number of bazaars organized by the Government is one. Even so, the proportion of SHG members who participated in bazaars (47.3%) was by far better than the proportion of non-SHG members (7.2%) who participated in bazaars. It is also important to note that opportunities to participate in bazaars are equal for SHG and non-SHG members. Another important variable, especially for household food security, is the access to and utilization of

loans for household consumption. While about 20% of the SHG members took consumption loans, about 48.6% of the non-SHG members took loans for household consumption.

It was also necessary to look at the types of empowerment variables and analyze their implications for individual and household decision-making processes. For example, the majority of the SHG members had regular weekly meetings, had the opportunity to lead weekly meetings, and workshops and were trained in vision building (73.3%, 76%, and 90.4% respectively) as compared to their non-SHG counterparts (32.6%, 9.4%, and 22.5% respectively). Although the differences between the groups are many, these would be the most critical ones that contributed to an enhanced decision-making power of women in SHGs as compared to the non-SHG respondents. SHG members lead their weekly meetings rotationally and in workshops, members divide tasks as coordinators, leaders, and service providers. These opportunities are the springboards for SHG members to develop their skills (such as speech, coordination, and leadership) and self-confidence to express their ideas logically and reasonably.

In addition, training in vision building would have made SHG members look forward, speculate on the impacts of each decision on their well-being, and help them to be determined to influence any decision that affects themselves and their families. This can be linked with the different purposes of borrowing money between SHG and non-SHG members. On average, non-SHG members borrowed 9,766.85 Ethiopian Birr (ETB) whereas SHG members borrowed 7,325.72 ETB. Furthermore, 48.6% and 47.1% of the non-SHG members borrowed for consumption and income-generating activities as compared to 19.9%t and 94.5% of the SHG members who borrowed for consumption and income-generating activities. These threads of loans can speak about the vision of the borrowers. Wise and knowledgeable borrowers can borrow and invest in something that has a high return value while others borrow, consume, and remain indebted. While the first scenario drives women to acquire resources thereby building their confidence to negotiate with their spouses, the second scenario deprives of women resource acquisition thereby their confidence to negotiate with their spouses and household members.

By implication, the exposures that the SHGA has opened for organized women have expanded their holistic awareness, widened their knowledge base, transformed their attitudes

on conventional gender roles, equipped them with technical, communication, life, business, and negotiation skills, and built their self-confidence thereby improved their participation in and influence on decisions that matter them most. It means also that women in SHGs do not let things go simply because they are shy and powerless. It seems that they become rational.

Thus, the study has indicated that the SHGA has assisted women in urban and rural communities of Ethiopia to receive education and training opportunities, opened platforms where they can exercise leadership, ask questions, elaborate on issues, become visionary, actively engage in income-generating activities thereby own resources and develop their negotiation skills thereby enhanced their capabilities to strongly influence the decisions and their impacts around their individual and household affairs.

4.4.4. Effects of membership in SHG on women empowerment: Multivariable analysis

The null hypothesis (H_0) and alternative hypothesis (H_1) of the study were the following.

H_o: $\mu_1-\mu_2=0$ or $\mu_1=\mu_2$: There is no statistically significant difference between the decision making powers of women organized and not organized in the SHGs in the study areas

H_1: $\mu_1-\mu_2\neq0$ or $\mu_1\neq\mu_2$: There is statistically significant difference in the decision making power of these two study groups.

Where μ_1 and μ_2 are the population means of respondents organized in the SHGs (or group 1) and respondents not organized in the SHGs (or group 2), respectively. Furthermore, an alpha level of .05 was used for all statistical tests. In addition, dummy variables[32] like urban residence, education and disability, mobile phone, and membership in SHGs are used to compare statistical test outcomes.

In view of the hypothesis, an OLS regression was used. As indicated in Table 17, the tests of model effect shows that nine (9) out of 13 independent ordinal variables were statistically significant (*p=.05).* All variables, except the main exposure variable (membership in self-help group), were entered into the model as control variables. More importantly, membership in SHGs was found statistically significant (*p=.01)*.

Table 18: Effects of membership in self-help group on the level of women empowerment

Parameters	B	SE	Sig.

[32] A variable with only two possible values: 0 = outcome absent and 1 = outcome present

Parameters	B	SE	Sig.
1) Place of residence			
Rural	-1.585	.0556	0.000
Urban	0[a]	.	.
2) Educational status			
Illiterate (cannot read, write and compute)	-.953	.1614	0.000
General education (from grade 1-12)	-.505	.1533	0.001
College and above levels of education	0[a]	.	.
3) Having any disability			
Yes, some kind of disability	-.464	.1089	0.000
No, I have no any kind of disability	0[a]	.	.
4) Membership in self-help group			
No, I am not a member	-.152	.0460	0.001
Yes, I am a member	0[a]	.	.
5) Ownership of mobile phone			
No, I have no mobile phone	-.173	.0495	0.000
Yes, I have a mobile phone	0[a]	.	.
6) Age of the respondent	-.035	.0038	0.000
7) Household size	-.015	.0109	0.181
8) Number of days participated in short term trainings	.038	.0044	0.000
9) Landholding size owned by the household (in hectare)	-.013	.0398	0.750
10) Number of big animals (like cows & oxen) owned	-.075	.0125	0.000
11) Number of equines your family owned	.359	.0495	0.000
12) Number of goats and sheep the household owned	-.023	.0099	0.020
13) Number of small animals like hen the household owned	.005	.0069	0.474
(Scale)	1[b]		
R-squared (R^2)	.164		

Source**:** Own survey, Dec/2021

The OLS regression result reveals that the empowerment levels of SHG members was statistically significantly higher (*p=.01)* than the empowerment levels of the study respondents that were not organized and participated in any SHG activities. In addition to the SHG membership, literacy level, landholding size, number of big animals like cow and oxen, goats and sheep and chicken were statistically significant variables that positively influence the decision making levels of women. Furthermore, the R-squared (R^2) value of 0.164 indicates that women empowerment is explained by about 16.4% of the independent variables in the model.

These findings suggest the rejection of the null hypotheses (H_0: $\mu_1 - \mu_2 = 0$ or $\mu_1 = \mu_2$) and acceptance of the alternative hypotheses (H_0: $\mu_1 - \mu_2 \neq 0$ or $\mu 1 \neq \mu 2$) of the women empowerment variables. While age was inversely correlated with women's decision making

levels, family size, landholding size and number of chickens of a household do not have statistically significant role on women's decision making levels at alpha 0.05.

The women and children affairs office head of the then Gozamin district has explained that SHGA has completely changed women's attitudes, improved their knowledge and skills. In the past, we have been trying to help them freely speak, ask questions, report cases of abuse and violence and demand their rights. Nevertheless, the changes were immaterial. But, because the SHGA facilitates regular discussion sessions where they all learn to speak, ask and answer questions, as well as every member leads weekly discussion session on rotational basis and there are several trainings, SHG members have attained high level changes in their skills, attitudes and knowledge. Many of the Kebele chairpersons are now SHG member women because of their capacities and experiences. They are confident, skillful and capable of mobilizing the local people for development.

In summary, this study has revealed that women organized in SHGs demonstrated an adequate level of empowerment in making and/or influencing decisions related to their individual and household affairs. Furthermore, their empowerment index was better than women who were not organized. As indicated by the focus group discussants, key informant interviewees, and source materials (KNH 2014), SHG members were identified as the most destitute and vulnerable households in their community through participatory wealth ranking and social mapping techniques before they were organized. It was from the most destitute households that women, who can be wives or heads of households, were voluntarily organized in the SHGs. Furthermore, SHGs undertake regular weekly meetings, regular savings, internal lending, and record keeping and engage in income-generating activities individually and/or in groups. Among the 16 women empowerment variables included in the household survey administered for this particular study, SHG members scored well above 50% in 12 variables computed using percentage while respondents who were not organized in SHGs scored slightly higher than 50% in only two of the empowerment variables included in the study.

It was also necessary to look at the types of empowerment variables and analyze their implications for individual and household decision-making processes. For example, the majority of the SHG members had regular weekly meetings, had the opportunity to lead

weekly meetings, and workshops and were trained in vision building (73.3%, 76%, and 90.4% respectively) as compared to those respondents who were not organized in the SHGs (32.6%, 9.4%, and 22.5% respectively). Although the differences between the two study groups are many, these would be the most critical ones that contributed to an enhanced decision-making power of women organized in SHGs as compared to respondents who were not organized in SHGs. SHG members lead their weekly meetings rotationally and in workshops, members divide tasks as coordinators, leaders, and service providers. These opportunities are the springboards for SHG members to develop their skills (such as speech, coordination, and leadership) and self-confidence to express their ideas logically and reasonably. A woman from the Gozamin district explained '*The most critical change I brought through the SHGA is the ability to stand up in front of people and express my ideas. If I was not organized in the SHG, you wouldn't get my ideas now because I would have remained fearful as I was before*.'

The study findings clearly depicted that the SHGA has opened exposures for organized women to expand their holistic awareness, widened their knowledge base, transformed their attitudes on conventional gender roles, equipped them with technical, communication, life, business, and negotiation skills, and built their self-confidence thereby improved their participation and influence on decisions that matter them most. Thus, the study has indicated that the SHGA has assisted women in urban and rural communities of the study areas to receive training opportunities, opened platforms where they can exercise leadership, ask questions, elaborate on issues, become visionary, actively engage in income-generating activities thereby own resources and develop their negotiation skills that ultimately help them to enhance their capabilities to strongly influence the decisions made around their individual and household affairs.

Finally, it is important to mention the strengths and limitation of the present study. The strength of the study was the use of primary data collected from both organized and not organized respondents which entails the possibility of tracing valid association between the exposure and the outcome. The findings help policy makers and program administrators in their planning, monitoring and evaluation of progresses in women empowerment. The study was limited merely to the variables listed in the methodology part, and there might be some

important control variables not included in the analysis. Moreover, as the data were collected based on cross-sectional survey design, drawing cause-effect relationship among the explanatory and outcome variable was not possible. Furthermore, given most mothers had little or no education, some of the variables used in the analysis might be influenced by possible recall bias and perception of the respondents.

4.5. Conclusions

The purpose of this study was to examine the decision-making power of women organized and not organized in the self-help groups in Debre-Markos City and Gozamin District. The findings show that women organized in SHGs were adequately empowered in making decisions on their individual (80%) and household affairs (90%) whereas respondents that were not organized in SHGs were inadequate decision makers on individual (60%) and household affairs (70%). The decision making levels of women organized in the SHGs were statistically significantly higher ($\alpha=.05$) than the decision making powers of respondents that were not organized in SHGs.

The SHGA in the study areas primarily targets on women and applies participatory wealth ranking and social mapping tool to identify the most destitute and vulnerable ones. This suggests that if the appropriate empowerment tools are applied, the most destitute women can become active, productive, and independent. Facilitated externally, the empowerment has come from within the women. It can be concluded that SHGA is a good model for women empowerment thereby to improve women's decision making capacity. It has the right technique and capacity to psychologically, economically, socially, financially, and technically empower women.

4.6. Recommendations

Based on the findings of this study, the research recommended 1) the development of a more comprehensive women empowerment indices 2) the most vulnerable and impoverished women in a given society can be substantially empowered through the SHGA and 3) for empowerment to happen, focus on their intangible assets development through the assignment of trained mentors, provision of trainings, exposures and facilitating discussion forums.

CHAPTER FIVE: SYNTHESIS OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter closes the dissertation work by presenting a synthesis of key findings presented in the previous chapters and their interconnectedness. The study culminates by presenting a synthesis of core findings around the general objective and the specific objectives of the study and their implications. This final chapter is composed of five sub-topics; namely the synthesis, the interconnectedness of major findings, convergence to and divergence from relevant empirics and theories, the contributions of the study, and future implications.

5.1. Synthesis of Key Findings

5.1.1. Promising contributions of the SHGA to household food security

First of all, the study revealed that households organized in self-help groups had better household food security status across the three food security measurements used. The findings revealed that more proportion of households organized in SHGs were better in their food security. Their households were food secure for more months within a year and able to consume more diversified meals than the households that were not organized. While these findings are consistent across the three food security measurements (i.e., HFIAS, MAHFP, and HDDS), a more triggering issue is the question of how and why. To get reasonable answers to these questions, the study attempted to look into the explanatory attributes of food security of the two study groups specifically the sex, marital status, and age. First, the study respondents are all women so sex does not come into this discourse. The remaining variables are age and marital status. Organized and not organized respondents had differences in their marital status. First, marital status was strongly and positively associated with household food security. Second, more proportion of the SHG members were married as compared to the women not organized in SHGs. This suggests that SHGA has, in any way possible, improved the marriageability of women and its sustainability. It can be by improving women's social and economic participation thereby their earnings and asset ownership that can attract more men or by improving their logical arguments to claim their rights and resources and properly make use of them for the benefit of their households. Furthermore, the research participants were all of the reproductive age. However, age was statistically significantly ($p=0.040$) positively associated with the household food security of households

organized in the SHGs while it was statistically significantly (*p=0.019)* and negatively associated with respondents who were not organized. It is believed that the SHGA, by providing various capacity development training, education, and exposure visits, has improved the labor productivity of SHG members whereas households not organized in SHGs have remained less active in social and economic activities because of a lack of such exposures. Hence, the issue would not be in the age of the respondents but in their knowledge, attitude, and skills. Therefore, the marriageability and labor productivity of organized women is associated with their food security.

5.1.2. Determinants of household food security

The findings have revealed that Eight (8) predictor variables (i.e., age, marital status, educational status, membership of community health insurance, training on business plan preparation, income generating activities, harmful traditional practices, and gender equality, SHG membership and ownership of small ruminants) were positively associated with the food security of respondents organized in self-help groups. Among these eight variables, training on business plan preparation and income-generating activities (*p=0.029)*, training on HTPs and gender equality (*p=0.010)*, membership in community health insurance (*p=0.008)*, membership in and borrowing from the self-help groups (*p=0.023)* and ownership of small ruminants such as sheep and goat (*p=0.049)* were statistically significantly and positively associated with the household food security. For importantly, focus group discussants from Gozamin district, Enerata Kebele, have noted that their awareness on harmful traditional practices and violence against women has increased since they are organized in the SHGs. Majority (70 %) of the discussants witnessed that husbands of not organized women in their neighborhood commit violence against their wives. In addition, about 71 % of the discussants said that they would report violence against women to the Kebele administration and police and would tell the offending husband to stop the violence. They have further noted that this is attributable to the increased level of awareness of SHG members and their better recognition to HTP and gender-based violence cases, which were considered as norm practices between the spouses.

On the other hand, three predictor variables (i.e., membership in community health insurance (*p=0.033)*, possession of electric appliances (*p=0.003),* and ornaments (*p=0.026*)) were

found statistically significantly and positively associated with the household food security of respondents that were not organized in self-help groups. In common, the household food security of the respondents that were organized in the SHGs and not organized respondents were statistically significantly and positively associated with their membership in community health insurance.

These findings clearly show that respondents organized in SHGs had more number of positive and statistically significant household food security determinants as compared to the household food security determinants of respondents that were not organized in the SHGs. This indicates that households organized in the SHGs had a relatively more stable household food security situation than respondents that were not organized in the SHGs. This is because the increasing size of positively and statistically significant food security variables increase the resilience level of the respondents. Therefore, respondents organized in SHGs were more resilient than respondents who were not organized in the SHGs. As Degefa (2010) noted, the poor, food insecure and vulnerable households cannot withstand various food security shocks while the better ones can withstand them. Hence, the availability of positive and statistically significant household food security variables implies the better capacity of the households to withstand shocks and vulnerabilities.

The focus group discussants from Giraram Kebele of Gozamin district have shared their personal experiences and opinions on their household income, expenditure and food security situation. They have noted that they improved their household incomes by diversifying their business sectors, mainly by engaging in mini-trades like retail and chicken and goat rearing and earn much higher volume of income after forming their SHGs and increased their household expenditure from their income to feed their households. Due to this, the food varieties, volume and frequency of meal are improved in their households.

These findings drove the researcher to raise two important questions. First, why households organized in SHGs have more food security determinant variables than the households that were not organized in SHGs? Second, what possible associations do those food security determinants have with the SHGA? A reviewed material (KNH, 2014), for example, has made it clear that SHG members have well-organized and structured education, training, awareness raising, and participation in social, economic, and political events and event

coordinating opportunities that continuously and consistently enlighten SHG members. Conversely, women not organized in SHGs do not have such organized education and training opportunities. They are rather under the conventional patriarchal household environment without new insights into their rights and hidden capabilities. Hence, SHGA has both increased number of food security determinants by expanding the education, training, and awareness-raising horizons for women and has empowered them to practically exercise their newly acquired knowledge, attitude, and skill to improve the livelihood situation of their families.

These food security predictors are the focuses of the SHGA implying that women organized in SHGs have acquired these opportunities because of their SHG membership. On the other hand, membership in community health insurance has a statistically significant impact on the food security of household organized and not organized. Membership in community health insurance is mandatory for every household so that both organized and not organized households benefit from it. This indicates that differences in capacity development opportunities cause differences in food security and empowerment outcomes. Furthermore, age was a statistically significant food security determinant for households organized in the SHGs, but not for households that were not organized. This hints that age, coupled with other empowerment variables such as education and training, is an important household food security determinant element. Under normal circumstances, healthy and young persons are expected to have more excelling productivity than others. The findings indicate that the SHGA has the methodology to identify the most disadvantaged community members and tailor approaches to holistically empower them to claim access to and utilize diverse household food security determining resources. Unless the most disadvantaged community members are identified by gender, development practitioners cannot develop and apply tailored empowerment methods and tools so that the relatively aware and better-off community members continue taking advantage of all development interventions while the most disadvantaged ones often remain behind. Importantly, the homogeneity of organized persons in terms of sex, age, economic and educational status is a very crucial success factor. This hints that the effectiveness of the SHGA begins at the beginning when it conceptualizes how to make solid, self-supporting, and mutually benefiting group members with clear visions at individual and different women's institution levels.

An expert from Facilitator for Change (i.e., an organization that supports the SHGA in the study areas) has noted the following.

> As children focused organization, we have been trying different development models to improve household food security and the well-being of children and mothers. In Amhara and Oromia National Regional States, we had been diverting rivers, constructing small dams, supporting soil and water conservation practices and supply of improved seeds for the rural farmers in order to improve the yields of agricultural lands and sustain the productivity. By these methods, we have improved the land productivity in both regions. However, the yield goes back to the ownership and control of men so that household level changes in terms of food security were not visible. Later on, we adopted the SHGA as our development, food security, children's well-being and mothers' empowerment approach. Gradually, SHGA has become our leading program model. Women organized in this approach have shown tremendous developments in terms of self-assertiveness, initiating their own income generating activities, saving money, internal lending, establishing centers for children to play and learn, actively engaging in soil and water conservation works and changing their homes, clothes and household materials. They invite and show us. They also celebrate their inception dates inviting government bodies and local elders. When they celebrate their inception dates, they all bring different handicrafts and business commodities to display to the guests, sell and show as model products. They often make it a Bazar day with colorful materials. This day is a day of enjoyment, experience sharing, business and learning.

5.1.3. Women empowerment and gender equality

As compared to the cut-off point of the women empowerment index computed in this research (0.8), adequate and better levels of women empowerment are observed among women organized in the SHGs than women not organized. Women organized in SHGs possessed majority of the decision-making capabilities necessary to decide on or influence the decisions on individual and household affairs. While such capabilities are generally necessary to promote the well-being of the household, they are in particular important for women's personal lives. Women organized in self-help groups possessed the majority of the

decision-making capabilities necessary to decide on or influence the decisions on individual and household affairs. While such capabilities are also necessary to promote household-level food security, they are particularly important for women's personal lives. The quality of life can be measured, among others; by the freedom of the person to freely move from one place to another for social, economic, and personal reasons and her/his freedom to accumulate wealth and utilize it to meet her/his prioritized needs. It is also important to note that quality of life can be measured by the ability of the person to decide on her/his personal life elements such as reproductive health (UN, 1995; Mandal, 2013). Sen (1999) boldly wrote that if there is development, it should expand the real freedom of people and freedom is an instrumental means for sustainable development. Women in Ethiopia have limited social, economic, psychological, emotional, bodily, and political freedoms. To get such women and advance their capabilities through different mechanisms, one should have the right strategy. Once empowered, capabilities put SHG members on equal footing with their husbands in terms of deciding on personal and household affairs. Once fundamental freedoms like the right to move, get organized, and attend meetings, are empowerment, then sustainable development shall prevail. This is critically important because inequality is the major cause of household food insecurity and other vulnerabilities. In other words, the SHGA has proved itself as a useful gender equality tool. This is critically important because inequality is the major cause of household food insecurity and other vulnerabilities in Ethiopia in general and in the study area context in particular.

Statistical test results have also shown that there was a statistically significant difference between organized and not organized women in terms of their decision-making powers. The areas of decision-making domains such as attending local community meetings, purchasing food or other household items, reproductive healthcare, and the right to use one's time on socio-economic activities she believes are beneficial and children's education was very critical for one's personal and household level benefits. Overall, the research findings have shown that women organized in the SHGs were better empowered in terms of decisions on individual and household affairs. We have also identified the following factors that cause such statistically significant differences in the empowerment levels of women who were organized and not organized in SHGs.

First, SHGs undertake regular weekly meetings, savings, and internal lending for income-generating activities. These are the opportunities for women organized in the SHGs because of their membership while women that were not organized in the SHGs did not have such empowerment opportunities. The majority of the empowerment opportunities focus on human capital development and gender equality which are critical in solving individual and household level problems. For instance, SHGs conduct weekly meetings following well-structured training material on seating arrangement (which has a circle or oval or semi-circle shape so that everybody can see each other), an empowering meeting moderation technique (which is rotational every week so that every member will have the chance to be a meeting moderator and to be active participant), writing meeting agendas and resolutions that necessitated the integration of functional adult literacy within the SHGA and training on basic financial recording. Similar detailed training and mentorship by trained community development facilitators precede the practical application by the SHG members. Therefore, tasks and activities gradually transferred from the community facilitators to all SHG members depending on their performance assessment. Such opportunities enabled SHG members to explore and utilize more opportunities effectively. A more conscious and aware community is created through the SHGA. For instance, a significantly higher proportions of women not organized in SHGs took consumption loans while a significant proportion of SHG members took business loans. Hence, given the two study groups have equal opportunities such as access to credit, the purpose of loan differs between them largely because of their differences in consciousness and/or determination. Both consumption and business loans would have their own short-term and long-term benefits though a more strategic one is borrowing for economically profitable ventures. It is all about vision and determination. Therefore, it is believed that, by prioritizing and focusing on human capital development, the SHGA has meaningfully contributed to an enhanced decision-making power of organized women. By many standards, the decision-making powers of organized and not organized women who participated in this study have become incomparable.

Second, women organized in the SHGs have trained female mentors responsible for coaching, empowering and gradually handing over the empowerment tasks to the SHG members themselves. The coaches are like nurses, caregivers, and nans that provide care and support for those who need or are in a problematic situation. This makes the empowerment

process a step-by-step approach. For this step-by-step empowerment approach, there are timetables to follow.

5.1.4. Interconnectedness of the key issues of the study

The findings indicate that age, educational status, marital status, access to training on business plans and income-generating activities, harmful traditional practices, gender equality, membership in community health insurance, access to business loans, ownership of small ruminants such as sheep and goat, availability of appliances such as cooking utensils and ownership of different ornaments were statistically significantly and positively associated with the household food security of the respondents. This indicates the importance of working on such impactful food security variables while designing and implementing empowerment and food security programs. More importantly, the training, saving, and access to loans, and loan utilization skills are crucial components of such an intervention. In particular, the internal lending opportunity has relieved them from exploitative informal financial dealers and insurmountable preconditions of formal financial institutions like microfinance and banks. The findings have also shown the magnitudes of investment made by the SHG members to unleash their development potentials, establish and strengthen women's institutions, and link women's institutions with other SHGs, cluster-level associations and federations operating in Ethiopia, with local government administration, sector offices, public service providers and the private sectors.

Analysis was also made to verify if household food security was influenced by the empowerment level of women. The finding has revealed a statistically significant association between women's empowerment and household food security. Hence, there is valid and reliable evidence that shows that SHGA is strongly and positively associated with women empowerment, and women empowerment and household food security are also strongly and positively associated. These findings lead to the conclusion that there are strong and direct correlations between women's empowerment and household food security. Furthermore, the three outcomes of this research reflect the magnitude and effectiveness of the investments made to institute the SHGA, to establish SHGs, and to empower the members. Perhaps, it is vital to note here that investments are effective only when the development model and institutional arrangements are well-fitted.

5.1.5. Convergence to and divergence from women empowerment and food security theories

Research papers and food security theories such as FAO (2017), Dagnaygebaw (2019), Mequanent *et al*. (2014), and Tewodros & Fikadu (2014) identified unfair livelihood asset distribution among households and individuals, natural disasters such as drought, depletion of natural resource bases, gender inequality, conflicts and war, climate change and variability and population pressure, to mention few, as causes of food insecurity of households, communities and nations. The sustainable livelihoods framework is one of the approaches to household food security and livelihood promotion (FHI 360, 2014). Others identified human-made food insecurity/security drivers like conflict (FAO, 2017), instability, corruption and aid dependence (Dagnaygebaw, 2019), farmland shortage, land degradation and fragmented farms, poor agricultural technologies, scarce agricultural extension services, loan from village money lenders, consumption loan, selling crops soon after harvest, erratic and untimely safety net support (Mequanent *et al*. 2014; Tewodros & Fikadu, 2014; Dagnaygebaw, 2019), education and training opportunity (Mutiah & Istiqomah, 2017), use of agricultural input (Mequanent *et al*. 2014), diversified household income including gift and remittance, ownership of bank account (Ejigayhu & Abdi-Khalil, 2013), place of residence (Tewodros & Fikadu, 2014) in the global, African, Sub-Sahara African, Eastern Africa and Ethiopian contexts. It would be true that such factors can play complementary roles in food insecurity/security situation of households.

However, this research finding has shown that the food security determinants of the households organized in the SHGs include training opportunities, ownership of small ruminants such as sheep and goats, knowledge, attitude, and skill in regular saving, borrowing, and investing in profitable income-generating activities. Similarly, ownership of appliances and possession of ornaments were positively associated with the household food security of households not organized in the SHGs. However, landholding, commercial trees, family size, family health, place of residence, membership in traditional and religious groups such as Iqub and Mahber, membership in government-led groups such as local-level women's associations and leagues, ownership of oxen, cows, equines, sheep, goats, and chicken were not statistically significantly associated with food insecurity/security of organized and not organized households. Due to this, a certain level of divergence was

observed between the current and existing research findings on household food security/insecurity determinants. In the current study, it was the human capital elements such as knowledge, attitude, and skills on regular saving, borrowing, and investing in profitable business activities that were significantly associated with household food security suggesting that household food security is associated with advanced human capital elements that can help to prevent most of the food insecurity causes, properly manage resources, boost economic gains and make decisions rationally. For example, this study has found that educated respondents were 3.826 times more likely to be food secure than illiterate respondents. In line with this, Dereje *et al*. (2022) mentioned that the inability to effectively use accessible and available livelihood resources is one of the food insecurity factors in Ethiopia. In this case, the current research finding supports the claim that limited resource utilization capacity is associated with household food insecurity.

On the other hand, empowerment approaches, especially women empowerment (UN, 1985; Calves, 2009; Mandal, 2013; Mokta, 2014; Huis *et al*. 2017; Ghanghas, 2018) stress the significance of women's decision-making, self-confidence, assertiveness, positive self-image and attitudes to others, access, control and management of resources, ability to engage in evidence-based and constructive dialogues to influence others as important food security variables. Women empowerment has received growing prominence in the 21st century sustainable and equitable development discourses. Experts in this field systematically classify empowerment as psychological, cognitive, educational, economic, physical, social, and political/governance. The reasons behind emphasizing on women's empowerment would be three 1) empowered women are needed to prevent emerging problems and solve existing miseries 2) to emancipate women from all forms of sufferings they were and are experiencing and 3) ensure that human rights are fulfilled, protected and respected indiscriminately. In this regard, as SHGA itself is one of the women empowerment methodologies, the current research findings largely converge with the philosophies, thoughts, and rationales of the empowerment approach. This is demonstrated by the current research as women organized in the SHGs were by far better than women not organized in SHGs in terms of household food security, women's decision-making power, and size of household food security determinants. On top of these, the food security determinants of women organized in the SHGs were largely embedded in the human capital domain.

5.1.6. Contributions of the dissertation work

i. Contribution to the knowledge base

The research has found sufficient evidence to claim that the findings of this study have informed existing bodies of knowledge on the food security models of a given society or group of community. More importantly, the findings have the evidence and capacity to challenge the general public and state the notion that external financial and material supports are necessary to empower the powerless and assist disadvantaged community groups to come out of their food insecurity situation. There are several development approaches in Ethiopia and elsewhere such as micro and small enterprises and cooperative societies that consider external material and financial supports as critical empowerment tools. On the other hand, the self-help group approach bases itself on naturally given human potentials that can be cultivated and/or reoriented in a way to become knowledgeable, skillful, and productive. This approach believes that training, coaching, and reorienting a person's mental setup, attitude, and perception thereby helping her/him to release her/his naturally given development potentials are sufficient to ensure food security and sustainable development without external material and financial support. It further believes that external material and financial supports would further weaken the mental, emotional, and psychological courage of a person, let alone empowering.

The findings of this research substantially support the concept of "development from within". This concept refers to the development thought when citizens and nations can mobilize and utilize their resources and assets for their sustainable development. Women of different socio-cultural profiles but from the most destitute and impoverished households that formed their self-help groups are found substantially better in their household food security status and levels of empowerment as compared to women not organized in the SHGs. While the success factors identified include access to training, awareness-raising events, and coaching, they altogether focus on changing attitudes, equipping with knowledge, building skills, and promoting solidarity, support system, and voicing among SHG members. External financial and material support was not provided to these women. Therefore, the findings indicate that the engine of positive development and change is well-coached, cultivated, and developed human capital. This means that if development models assist the human capital development of a given society or nation, individuals and groups of individuals can gradually possess and

effectively utilize their material, financial, social, and political resources for their development and well-being. The then poorest, most disadvantaged, and destitute women in the study localities have proved this.

The second set of knowledge this research finding has brought forward is the importance of purposely empowering women from the household members. This purposeful targeting has considered multiple roles of women in Ethiopia. Because of various reasons, especially socio-cultural factors, women have remained far behind the times in terms of educational status, participation in all sorts of development processes, representation in all walks of life, and decision-making capabilities. This does not have any virtue at the individual, household, community, and national levels because it propagates unfair relationships, human resource wastage, and undignified life among citizens. The SHGA has tried to reverse this situation by purposefully targeting destitute and disadvantaged women and specifically investing in their personal, social, economic, and political empowerment considering their responsibilities. The purposeful targeting helps to compensate for women's missed education and training opportunities, exposures, representation, and active participation in development processes. The approach goes beyond gender equality and specifically targets cultivating and utilizing individuals' hidden talents and potentials without comparing the capacities and performances of women and men. It further sees on unequal treatment of the already unequal citizens due to past predicaments.

ii. Contributions to research methodologies and approaches

SHG members were identified through rigorous participatory rural appraisal methods such as wealth ranking, social mapping; transect walk, and community-wide appraisal methods. The villagers sit in a circle, draw maps on the ground using local materials such as dry and wet sticks, map out home locations, and select the most marginalized 15-20 households from the list. Similarly, households that were not organized in the SHGs were identified through the principles and application of participatory rural appraisal methods that were used to identify SHG members. Respondents were all women aged 24-49 (productive and reproductive age). This approach has substantially reduced the possible demographic and socio-economic differences between organized women before the SHG formation and non-organized women. Residents identified by this participatory approach have established the second sampling

frame. While the majority of these research methods and approaches are similar to many other academic research methods, this research has added three important methods to the commonly used research methods. These are the techniques used to identify women not organized in the SHGs, making all respondents women and deciding on the age ranges of the respondents at the research proposal development stage. Furthermore, the participants of this research were women who are critical household food security agents as producers, food preparers, hygiene and sanitation assurers, household food distributors, and beneficiaries. Engaging this segment of the household in the research is believed to provide more realistic, felt, and experienced household food security/insecurity data as compared to data obtained from men or mixed groups as available. These attempts were made to get relatively homogenous categories of respondents except their SHG membership. Researchers can also use the "before and after SHG membership" technique in their research. Others may randomly select women not organized in SHGs from the study community which provides heterogeneous respondents in terms of at least their demographic and economic status. Hence, the research has used the most appropriate methods and data sources to measure household food security, food security determinants, and women empowerment.

5.2. Conclusions

In conclusion, it is found that households organized in SHGs had better household food security status across the three food security measurements used. Furthermore, the households organized in SHGs were food secure for more months within a year and able to consume more diversified meals than the households that were not organized. Marital status was strongly and positively associated with household food security and more proportion of the SHG members were married as compared to the women not organized in SHGs. This has happened mainly because SHGA improves the marriageability of women and its sustainability by improving women's social and economic participation thereby their earnings and asset ownership, logical arguments to claim their rights and resources and properly make use of them for the benefit of their households. Furthermore, the SHGA, by providing various capacity development training, education, and exposure visits, has improved the labor productivity of SHG members whereas households not organized in SHGs have remained less active in social and economic activities because of a lack of such

exposures. Hence, the marriageability and labor productivity of organized women is associated with their food security.

In terms of food security determinants, training on business plan preparation and income-generating activities (*p=0.029)*, training on HTPs and gender equality (*p=0.010)*, membership in community health insurance (*p=0.008)*, membership in and borrowing from the SHGs (*p=0.023)* and ownership of small ruminants such as sheep and goat (*p=0.049)* were statistically significantly and positively associated with the household food security or organized households. Similarly, membership in community health insurance (*p=0.033)*, possession of electric appliances (*p=0.003),* and ornaments (*p=0.026*)) were statistically significantly and positively associated with the food security of respondents not organized in SHGs. Overall, households organized in the SHGs had a relatively better stable household food security than respondents that were not organized in the SHGs. The drivers behind these stable household food security among households organized in the SHGs include that SHG members have well-organized and structured education, training, awareness raising, and participation in social, economic, and political activities. However, women not organized in SHGs do not have such organized education and training opportunities. Hence, differences in capacity development opportunities cause differences in food security and empowerment outcomes. Furthermore, age, coupled with other empowerment variables such as education and training, is an important household food security determinant variable.

Regarding women's decision-making power, women organized in the SHGs scored an adequate and better level of women empowerment. Women organized in SHGs possessed majority of the decision-making capabilities necessary to decide on or influence the decisions on individual and household affairs. The freedom to freely move from one place to another for social, economic, and personal reasons and women's freedom to accumulate wealth and utilize it to meet the prioritized needs of their households are critical empowerment pillars identified by this research. This is critically important because inequality is the major cause of household food insecurity and other vulnerabilities. Furthermore, a statistically significant association was found between women's empowerment and household food security indicating the strong and direct correlations between women's empowerment and household food security.

5.3. Implications and recommendations

Generally, this research outcome has policy, research, and practice-level implications or recommendations. It is learned from the present research findings that women organized in self-help groups perform better in terms of food security and women empowerment than women not organized in SHGs. The research findings indicated the following areas of recommendations for future considerations.

5.3.1. Policy implications

Considering the core findings of the present research and the reviewed materials, it was learnt that the SHGA is one of the potential empowerment and food security models that deserve attention.

- The SHGA needs national-level policy recognition. For this, Non-Governmental Organizations and their Consortium shall push forward and propose the importance of the legalization of the SHGA in Ethiopia. Relevant government ministries shall be included in the process and shall own the task of legalizing the SHGA. The Government of the Federal Democratic Republic of Ethiopia, without a gross violation of its existing essence, features, and principles, needs to legally recognize this empowerment and food security alternative approach to;
    - Advance the knowledge, attitude and skills of the citizens for a sustainable development
    - Attract the support and contributions of the donor community,
    - Collaborate with financial intermediaries and institutions,
    - Establish and strengthen the partnership and collaboration of the SHGA structure and government, non-governmental and private development partners,
    - Promote learning and experience sharing and
    - Scale up the geographic coverage including pastoralist communities and include the largest proportion of the most destitute and disadvantaged group of the population such as women.
- Government authorities and agencies relate SHGA with cooperative societies. However, SHGA and cooperative societies in Ethiopia are completely different. Thus,

cooperative laws and proclamations do not apply to the SHGA. This necessitates not only the law but also the establishment of SHGA governance structure within the government machinery;

- SHGA focuses on the holistic empowerment of human beings including political empowerment. Since SHGA is a non-partisan agglomeration of the destitute [women in Ethiopia] so considering the group as a political body is a misunderstanding of the essence of the approach;

5.3.2. Research implications

Considering that the present research is conducted in a relatively small geographical location having similar weather and climatic conditions, socio-cultural and political contexts, the following areas are suggested for further exploration at larger scales and diverse contexts.

- This same research needs to be replicated at larger scales (regional and national levels) and in a diverse context. Multiple food security variables that would be common to and/or different for different regions and the country context need to be considered. Government, scholars, donors and other interested parties can do the researches and/or commission them.
- Beyond the implication of the SHGA to household food security, food security determinants and empowerment, the impacts of SHGA on other human lives such as marriage life, children's education, household health, environmental protection and natural resources management, social cohesion at community level and community asset building deserve separate studies. Such studies can be conducted by the Ministry of Women and Social Affairs of the government, Ministry of Peace, scholars, donors and Non-Governmental Organizations.
- Researching the roles and magnitudes of the contribution of SHGA against the necessary government spending to reach the same level of empowerment and household food security is commendable. This kind of research can best be conducted by government ministries such as the Ministry of Agriculture, Trade, and Economic Cooperation.
- Comparative studies are necessary between SHGA and other development and empowerment approaches being implemented in Ethiopia such as cooperatives,

PSNP, and household asset-building programs focusing on their impacts on the knowledge, attitude, and skills of the program users, household food security, women empowerment and other development indicators. This research can be well managed by relevant government Ministries like Ministry of Agriculture, Economic Cooperation and Disaster Prevention and Preparedness Commission.

- Investigating the roles of SHGA in instituting a saving culture, sketching flexible and trustworthy credit systems, and stimulating local financial resource mobilization and management is important. This research can be conducted or sponsored by the banks and microfinance institutes.
- Study on creating a platform or working with government, non-governmental organizations, forums, and the SHGA structure for evidence sharing, learning, and improving is necessary. This can be organized and facilitated by the Consortium of Self-Help Group Approach Promoters (CoSAP) in Ethiopia.

5.3.3. Implications to practice

- The SHGA strictly focuses on the knowledge creation, attitudinal change, skill acquisition and determination among the organized community members. Reorienting and capacitating human mindset is a low-cost, reliable and permanent solution for current and emerging challenges. The investments made have helped organized women to mobilize and utilize their financial, material, labor, and skills resources. There are no financial and material handouts to the SHGs, cluster-level associations, and the federation. This can serve as a lesson to other empowerment approaches and significantly contribute to self-initiated, self-managed and sustainable development. SHGA does not need foreign currency and a government budget. It runs its activities with its own finance and human capacity. Hence, by adopting the model, the government and other Non-governmental organizations can speed up development interventions such as citizens' engagement for poverty reduction, food security, well-being and similar internally driven development programs. It builds citizens' confidence and motivates citizens to accumulate valuable tangible and intangible assets and resources.

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APPENDICES

Appendix 1: Household Survey Questionnaire

The Implications of Self-Help Group Approach on Food Security in Debre-markos City and the Surrounding Rural Areas in Ethiopia

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Implications of Self-Help Group Approach to Food Security in Debre-markos City and the Surrounding Rural Areas in Ethiopia

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Introduction: Hello my name is ----------. There is one research on the "Implication of the Self-Help Group Approach to Food Security in Debre-Markos City and the Surrounding Rural Areas in Ethiopia". The study is conducted by a PhD candidate from Addis Ababa University with due recognition of the University to East Gojjam Zone, you and your Woreda and Local Administration. The purpose of the research is to document the implications of the SHGA to food security in the study areas.

Instructions: This is a structured household survey questionnaire aimed at collecting pertinent food security related data from SHG member and other non-SHG member women living in this Kebele. The tool will be administered by a trained interviewer in a face-to-face interview method. The interview shall be conducted in a safe and open space chosen by and suitable for the interviewee. This interview shall be conducted in the absence of any other adult including interviewee's husband to ensure confidentiality and avoid fear. The data collection will be made using a mobile phone. Every evening, the data collector shall review, edit and submit filled in questionnaires.

Confidentiality: Interviewees' name, telephone and other personal identifiers will not be included in the interview and in the report. Your photos are not also taken and posted on the report. We will use the information you will provide us for the purpose of academic research explained above.

Consent: Participating in this research does not bring any household or individual direct and immediate benefits or incentives for you. Your participation is purely voluntary. However, your participation helps the researcher, policy makers and practitioners to know more about contributions of the SHGA to household food security and the determinants with particular focus on the poorest and destitute women in the study locations. This will benefit everyone anywhere anytime. Now, therefore, we kindly request your willingness to participate in this research by responding to the questions I will ask you.

Do you have any questions before we proceed with our conversation?

Are you willing to participate in the research interview (put √)? Yes ☐ No ☐

Proceed to interview if the answer is yes or interviewee is willing to participate

S02 Interviewer's name: _____

No.	Question	Response options	Code	Skip to
	I) SOCIO-DEMOGRAPHIC QUESTIONS			
1.	Place of residence	1. Rural (outside Debre-Markos Town) 2. Urban (Debre-Markos Town)	[-------]	
2.	Your Kebele of residence	1. Aba-Libanos 2. Enerata 3. Giraram 4. 3 (Members of Hibret Tesfa CLA) 5. 5 (Members of Rayi and Edget Behibret CLAs) 6. 10 (Members of Limat Behibret CLA)	[-------]	
3.	How old are you?		[-------]	
4.	What is your marital status?	1. Single (unmarried) 2. Married (living with spouse) 3. Widowed 4. Divorced 5. Separated (my spouse lives in another place, not with me)	[-------]	
5.	Your educational status	1. Illiterate (unable to read and write) 2. Basic adult education (able to read and write in Amharic) 3. Primary (grade 1-4) 4. Junior secondary (grade 5-8) 5. Secondary (grade 9-12) 6. College and/or university graduate	[-------]	
6.	Housing status	1. I live in my own house 2. I live in rented house 3. I live in a house free of charge but not mine	[-------]	If 2 or 3, skip Q7
7.	Do you rent-out house/rooms or dormitory?	1. Yes 2. No	[-------]	
8.	How many female persons (women and girls) live with you now?		[-------]	
9.	How many male persons (men and boys) live with you now?		[-------]	
10.	How many children (below 18 years old) live with you now?		[-------]	
11.	In the past one year (2013 EC), was there any sick person from the family?	1. Yes 2. No	[-------]	If no, skip Q12
12.	If your answer to Q11 is yes, what was the cause of illness?	1. Accident (car, falling, fire, etc.) 2. Water and food borne disease 3. Malaria and other disease outbreaks like COVID-19 4. HIV and related STI 5. Other factors, specify 6. Disease factor not known, no medical checkup	[-------]	
13.	Do you have any disability?	1. Yes 2. No	[-------]	If no, skip Q14
14.	If your answer to Q13 is yes, what is the type of disability?	1. Hearing impairment 2. Visual impairment 3. Walking (movement) problem 4. Remembering/memory loss 5. Self-care problem 6. Communicating/understanding 7. Holding	[-------]	
15.	Is there any adult family member with disability other than you?	1. Yes 2. No	[-------]	If no, skip Q16
16.	If your answer to Q15 is yes, what type of disability?	1. Hearing impairment 2. Visual impairment 3. Walking (movement) problem 4. Remembering/memory loss 5. Self-care problem	[-------]	

No.	Question	Response options	Code	Skip to
		6. Communicating/understanding 7. Holding		
17.	Generally, if there is any person (including you) with disability, what is the impact on the household life?	1.It has little or no any negative impact on our livelihoods 2.It affects our livelihood negatively but very little 3.Very high impact, harms the movement and functioning of the person, couldn't work	[-------]	Check answers to Q13-16
	II) MEMBERSHIP AND PARTICIPATION RELATED QUESTIONS			
18.	Are you a member of self-help group?	1.Yes 2.No	[-------]	If no, skip Q19
19.	If you are a member of SHG, for how many years?	I am a member of SHG for the last -------- years	[-------]	
20.	Are you (and your family) a member of community health insurance?	1. Yes 2. No 3. I do not know	[-------]	If yes, skip Q21
21.	If no to Q20, why not?	1. I do not know about its existence and benefit 2. I have no money to become a member 3. I can afford healthcare costs, I do not need it 4. I cannot decide on such issues	[-------]	
22.	Are you a member of Idir, Mahber and other social groups and networks?	1. Yes 2. No		
23.	Are you a member of Iqub, SACCO/RuSACCO and other economic and business groups and networks?	1. Yes 2. No		
24.	Are you a member of village or Kebele women associations, leagues, development groups and other gender-based or similar groups and associations?	1. Yes 2. No		
25.	Do you have regular meetings with group and association members, friends, and/or peers?	1. Yes 2. No	[-------]	
26.	Have you ever led a meeting or workshop?	1.Yes 2.No	[-------]	
27.	Have you ever had participated in a bazaar/business fair?	1.Yes 2.No	[-------]	
28.	Are you active participant in Kebele and/or Woreda administration and government sector offices?	1.Yes 2.No	[-------]	
29.	Are you active participant in volunteer works?	1.Yes 2.No	[-------]	
30.	Are you a member of the management of the Kebele and/or Woreda Administration and/or sector offices?	1.Yes 2.No	[-------]	
31.	Are you a member of the management of the women associations, leagues, development groups or similar groups in which you are a member?	1.Yes 2.No	[-------]	
32.	Are you a member of the management of the Iqubs, Idirs, SACCO or RuSACCO in which you are a member?	1.Yes 2.No	[-------]	
33.	Are you a member of the management of volunteer associations and works you are participating?	1.Yes 2.No	[-------]	
	III) ACCESS TO TRAININGS AND EXPERT SUPPORT			
34.	**34.1.** Are you trained on saving culture and loan management	1. Yes 2. No	[-------]	If not trained at least in any of these topics, skip Q35
	34.2. Are you trained on business plan development, IGA selection and mgt.	1. Yes 2. No		
	34.3. Are you trained on recording business expenses and profits	1. Yes 2. No		
	34.4. Are you trained on harmful practices, child protection and gender equality	1. Yes 2. No		
	34.5. Are you trained on vision building and goal setting	1. Yes 2. No		
35.	As far as you remember, for how many days	I have participated in various trainings for --	[-------]	

No.	Question	Response options	Code	Skip to
	have you participated in short-term trainings other than your membership meeting?	-------- days (If you cannot count the exact days, please estimate)		
36.	Did (do) you have trained facilitators/mentors who provide you training/advice/support?	1.Yes 2.No	[-------]	
	IV) ACCESS TO SAVING AND CREDIT SERVICES QUESTIONS			
37.	Do you save money on regular basis (in the SHG, Iqub, etc.)?	1.Yes 2.No	[-------]	
38.	Do you have personal saving bank account?	1.Yes 2.No	[-------]	
39.	How much Birr do you have now in your bank account and other saving points?	I have ------- birr in my saving account and other saving points like SHG and Iqub	[-------]	
40.	Did you borrow money for HH consumption in the past three years (2011-13 EC)?	1.Yes 2.No	[-------]	
41.	Did you borrow money to invest on IGAs in the past three years (2011-2013 EC)?	1.Yes 2.No	[-------]	
42.	If your answer to Q40 &/or 41 is yes,			
	42.1. Did you borrow from my SHG/Iqub/Idir/[Ru]SACCO	1.Yes 2.No	[-------]	If all answers are "No" from Q42.1-42-4, skip 43
	42.2. Did you borrow from village money lender	1. Yes 2. No	[-------]	
	42.3. Did you borrow from relatives/friends	1. Yes 2. No	[-------]	
	42.4. Did you borrow from microfinance	1. Yes 2. No	[-------]	
43.	If you borrowed from microfinance institutes, from which microfinance institutes?	1.Harbu Micro finance institute 2.Amhara credit and saving microfinance institute 3.Local saving and credit cooperatives (RuSACO) 4.Other microfinance, please state	[-------]	
44.	How much Birr did you borrow from the above sources in the last **three** years?	I have borrowed -------- birr from all sources in the last three years	[-------]	
45.	Is borrowing money for IGA easy for you?	1. Yes 2. No	[-------]	
	V) QUESTION RELATED TO ASSETS AND EQUIPMENT			
46.	Which of the following assets do you (and your family) own?			
	46.1. Land (in hectare)	We have a farmland size of ------ ha	[-------]	
	46.2. Cows and heifers	We have ---------- cows	[-------]	
	46.3. Oxen and young male calf	We have ---------- oxen	[-------]	
	46.4. Equines	We have ----- equines (like horse, donkeys and mules)	[-------]	
	46.5. Small ruminant animals	We have ---- small animals (like sheep and goat)	[-------]	
	46.6. Small animals	We have ----- small animals (like hen, cock, chicken)	[-------]	
	46.7. Commercial trees	We have -------- commercial trees(like eucalyptus)	[-------]	
	46.8. Beehives	We have ------ colonies/bee-hives (modern/traditional)	[-------]	
	46.9. Household equipment	Do you have cupboards, seats, tables and beds? 1) Yes 2) No	[-------]	
	46.10. Electric appliances	Do you have TV, radio, cookers and refrigerator? 1) Yes 2) No	[-------]	
	46.11. Rentable equipment	Do you have household and agricultural tools and equipment for rent? 1) Yes 2) No	[-------]	
	46.12. Jewelries and ornaments	Do you have ear rings, rings, bracelets, necklaces, etc.? 1) Yes 2) No	[-------]	
47.	**47.1.** Do you use radio to listen to news and get other information?	1.Yes 2.No	[-------]	
	47.2. Do you use Television to listen to/see news and get other information?	1.Yes 2.No	[-------]	

No.	Question	Response options	Code	Skip to
	47.3. Do you use social media to listen to/see news and get other information?	1.Yes 2.No	[-------]	
48.	Do you have mobile phone?	1.Yes 2.No	[-------]	
	VI) WASH RELATED QUESTIONS			
49.	What is your **main** source of drinking water during dry seasons?	1. River 2. Spring (protected) 3. Spring (unprotected) 4. Water point (common water distribution point) 5. Personal water pipe within the compound 6. Hand-dug well	[-------]	
50.	What is your **main** source of drinking water during wet/rainy season?	1. River 2. Spring (protected) 3. Spring (unprotected) 4. Water point (common water distribution point) 5. Personal water pipe within the compound 6. Hand-dug well	[-------]	
51.	How many minutes do you walk to fetch drinking water (average for dry and wet seasons)?	It takes us _____ minutes to reach at the water source	[-------]	
52.	How many liters of water does your family consume per day for domestic purposes?	We consume -------- liters of water per day for drinking, washing, cooking and related domestic purposes.	[-------]	
53.	Do you (and the family) have a toilet?	1. Yes 2. No	[-------]	If no, skip Q54 & 55)
54.	If your answer to Q53 is yes, what type of toilet do you have?	1. Communal toilet 2. Private toilet within the compound	[-------]	
55.	Do you have hand washing facility around the toilet?	1. Yes 2. No	[-------]	
56.	What are your energy sources for domestic cooking and lighting?	1. Conventional (wood, grass, straw, cow-dung) 2. Clean (solar, biogas, electric) 3. Both conventional and clean depending on the condition	[-------]	
	VII) SOURCES AND AMOUNTS OF HH INCOME			
57.	How **much money** did you get from the following sources of income in 2013 EC (2020/2021)? (Dear interviewer, kindly ask in local units and convert into cash)			
	57.1. From your agricultural activities (mixed agriculture)		[-------]	
	57.2. From trade (goods and animals) activities		[-------]	
	57.3. From manufacturing activities (clay, metal, wood, cloth, handicraft, etc.,)		[-------]	
	57.4. From service provisions (tea, coffee, hotel, hairdressing, washing, etc.,)		[-------]	
	57.5. From remittance		[-------]	
	57.6. From daily labor activities		[-------]	
	57.7. From jobs like collecting and selling wood, charcoal, grass		[-------]	
	57.8. From Aid (Individuals, NGO and/or government aids)		[-------]	
58.	Are you a beneficiary of government's productive safety net program?	1. Yes 2. No	[-------]	
59.	If yes, for how many years are you a beneficiary?		[-------]	
60.	From where did you mainly cover your household food consumption in 2013 EC?	1.Own production/stock/saving/purchase 2.Aid and remittance/gift	[-------]	
61.	Do you have an income generating activity that you own and decide on?	1. Yes 2. No	[-------]	If no, skip Q62 & 63
62.	If your answer to Q61 is yes, what are your sources of income?	1. Agricultural production (mixed agriculture) 2. Trade (goods and animals) 3. Manufacturing (clay, metal, wood, cloth, handicraft, etc.,) 4. Services (tea, coffee, hotel, hairdressing, washing, etc.,) 5. Daily labor	[-------]	

No.	Question	Response options	Code	Skip to
		6. Jobs like collecting and selling wood, charcoal, grass		
63.	How much money do you get from your own sources of income per month?	I get an estimated ------ Birr income per month from all sources of income I command	[-------]	
64.	Do you have your own assets (animals, land, house, commercial trees, household equipment, Jewelries, and tools) that you can decide on their use?	1. Yes 2. No	[-------]	
65.	On average, how many days of the week do you use for economic activities?	A week has seven days	[-------]	
66.	On average, how many hours of the day do you use for economic (IGA) activities?	A day has 24 hours (day and night)	[-------]	
67.	On average, how many hours do you use for economic activities within 7 days (one week) (Q65*Q66)?	A week has 168 hours (24*7)	[-------]	The data collector can compute this, no need to ask
	VIII) FOOD SECURITY AND COPING STRATEGY RELATED QUESTIONS			
68.	In the past four weeks, did you worry that your household would not have enough food?	1.Yes 2.No	[-------]	If No, skip Q69
69.	If your answer is yes, how often you worry about lack of enough food in the last four weeks?	1.Rarely (1 or 2 times in the past 4 weeks) 2.Sometimes (3 to 10 times in the past 4 weeks) 3.Often (more than 10 times in the past 4 weeks)	[-------]	
70.	In the past four weeks, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?	1. Yes 2. No	[-------]	If No, skip 71
71.	If yes, how often you or any household member not able to eat the kinds of foods you preferred because of a lack of resources in the last four weeks?	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	
72.	In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?	1. Yes 2. No	[-------]	If No, skip 73
73.	If yes, how often you or any household members have to eat a limited variety of foods due to a lack of resources in the last four weeks?	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	
74.	In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	1. Yes 2. No	[-------]	If No, skip 75
75.	If yes, how often you or any household members have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food in the last four weeks?	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	
76.	In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	1. Yes 2. No	[-------]	If No, skip 77
77.	If yes, how often you or any household member have to eat a smaller meal than you felt you needed because there was not enough food in the last four weeks?	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	
78.	In the past four weeks, did you or any other household member have to eat fewer meals in a day because there was not enough food?	1. Yes 2. No	[-------]	If No, skip 79
79.	If yes, how often you or any other household members have to eat fewer meals in a day because there was not enough food in the last four weeks?	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	
80.	In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	1. Yes 2. No	[-------]	If No, skip 81
81.	If yes, how often was there ever no food to eat of any kind in your household because of lack of resources to get food	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	

No.	Question	Response options	Code	Skip to
	in the last four weeks?			
82.	In the past four weeks, did you or any household member go to sleep at night hungry because there was not enough food?	1. Yes 2. No	[-------]	If No, skip 83
83.	If yes, how often you or any HH members go to sleep at night hungry because there was no enough food in the last 4 weeks?	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	
84.	In the past four weeks, did you or any household member go a whole day and night without eating anything because there was not enough food?	1. Yes 2. No	[-------]	If No, skip 85
85.	If yes, how often you or any HH members go a whole day and night without eating anything because there was no enough food in the last 4 weeks?	1. Rarely (1 or 2 times in the past 4 weeks) 2. Sometimes (3 to 10 times in the past 4 weeks) 3. Often (more than 10 times in the past 4 weeks)	[-------]	
86.	**86.1.** What is the first/1st coping strategy of your household during food shortage periods?	1. Reduced quality and quantity of food 2. Passing food 3. Renting and selling assets (ox, cow, land) 4. Borrowing (money and/or food grain) 5. Migration including child labor 6. Begging 7. Scavenging 8. Working for food	[-------]	
	86.2. What is the second/2nd coping strategy of your household during food shortage periods?	1. Reduced quality and quantity of food 2. Passing food 3. Renting and selling assets (ox, cow, land) 4. Borrowing (money and/or grains) 5. Migration including child labor 6. Begging (remittance, food, cloth) 7. Scavenging food and cloths 8. Working for food and cloth (exchange)	[-------]	
	86.3. What is the third/3rd coping strategy of your household during food shortage periods?	1. Reduced quality and quantity of food 2. Passing food 3. Renting and selling assets (ox, cow, land) 4. Borrowing (money and/or grains) 5. Migration including child labor 6. Begging (remittance, food, cloth) 7. Scavenging food and cloths 8. Working for food and cloth (exchange)	[-------]	
87.	Were there months, in the past 12 months, in which you did not have enough food to meet your family's consumption needs?	1.Yes 2.No	[-------]	If No, go to Q89
88.	If yes, which were the months in the past 12 months in which you did not have enough food to meet your family's consumption needs?	Interviewer actively listens to the months the respondent recalls. Interviewer will also make sure that the respondent thinks through the 12 months exactly from the month of interviewing back one year.		
	88.1. January	1) Yes 2) No	[-------]	
	88.2. February	1) Yes 2) No	[-------]	
	88.3. March	1) Yes 2) No	[-------]	
	88.4. April	1) Yes 2) No	[-------]	
	88.5. May	1) Yes 2) No	[-------]	
	88.6. June	1) Yes 2) No	[-------]	
	88.7. July	1) Yes 2) No	[-------]	
	88.8. August	1) Yes 2) No	[-------]	
	88.9. September	1) Yes 2) No	[-------]	
	88.10. October	1) Yes 2) No	[-------]	
	88.11. November	1) Yes 2) No	[-------]	

No.	Question	Response options	Code	Skip to
	88.12. December	1) Yes 2) No	[-------]	
89.	Please describe the foods (meals and snacks) that you and your family members ate or drank in the past seven days (7days and 7 nights) at home but not outside the home. Start with the first food or drink eaten in the morning/day.			
	89.1. Cereal foods (foods prepared from corn/maize, rice, Teff, wheat, sorghum, millet, other cereals)	1. Yes 2. No	[-------]	
	89.2. Roots and tubers (foods prepared from potatoes or other foods from roots)	1. Yes 2. No	[-------]	
	89.3. Vegetables (dark green leafy) + locally available vitamin A rich leaves	1. Yes 2. No	[-------]	
	89.4. Fruits (foods prepared from mangoes, apricots, papaya, dried peaches + other available fruits)	1. Yes 2. No	[-------]	
	89.5. Meat and poultry (foods prepared from meat, flesh and poultry)	1. Yes 2. No	[-------]	
	89.6. Eggs (foods prepared from eggs)	1. Yes 2. No	[-------]	
	89.7. Milk, yoghurt and cheese (foods prepared from milk, yoghurt and cheese)	1. Yes 2. No	[-------]	
	89.8. Pulses/legumes (foods prepared from peas, beans, chickpea, 'Gibto' and lentils)	1. Yes 2. No	[-------]	
	89.9. Oils and fats	1. Yes 2. No	[-------]	
	89.10. Fish	1. Yes 2. No	[-------]	
	89.11. Sugar/honey	1. Yes 2. No	[-------]	
	89.12. Miscellaneous foods	1. Yes 2. No	[-------]	
	IX) WOMEN EMPOWERMENT RELATED QUESTIONS			
90.	Are you able to borrow from someone other than your husband/intimate partner some amount of money for yourself?	1. Yes 2. No	[-------]	
91.	Do you need the permission of your husband/ intimate partner or other family member to purchase food or household items?	1. Yes 2. No	[-------]	
92.	Do you need your husband/ intimate partner or other family member's permission to go to market or another village alone?	1. Yes 2. No	[-------]	
93.	Do you need the permission of your husband/ intimate partner or other family member to visit relatives and friends?	1. Yes 2. No	[-------]	
94.	Do you need the permission of your husband/ intimate partner or other family member to attend meetings of local community groups?	1. Yes 2. No	[-------]	
95.	Who decides on where to pass or invest your time?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
96.	Who decides on your healthcare (pre and postpartum, other health checkups)?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
97.	Who decides whether to be a pregnant or not (your child bearing)?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
98.	Who decides on whether to use or not to use family planning method?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
99.	Who decides on children's enrolment in	1) I myself decide		

No.	Question	Response options	Code	Skip to
	school?	2) My husband/ intimate partner 3) Both mutually 4) The whole family	[-------]	
100.	Do all your school age children (≥7 years) attend formal education/schooling?	1. Yes 2. No 3. I have no child aged 7 or above	[-------]	If yes or have no child aged 7 or above, go to Q102
101.	If your answer is No to Q100, what was the reason?	1. School is far from home, children can't walk that distance 2. There is risk of violence against children 3. I don't know that 7 years old children can enroll in school 4. I have no money to cover education expenses for all 5. They are working and earning to support the family, they have no time for education 6. They have health problem, they cannot go to school 7. I am not the decision maker, I do not why they are not enrolled	[-------]	
102.	Who decides on the use of the money you generated and saved?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
103.	Who decides on the use of the assets you accumulated?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
104.	Who decides on what foods and drinks to prepare for the family?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
105.	Who decides on the purchase of household assets (equipment)?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	
106.	Who decides on the sale of household big animals (cow/ox)?	1. I myself 2. My husband/ intimate partner 3. Both mutually	[-------]	
107.	Who decides on the sale of HH small animals (sheep, goat, and hen)?	1. I myself 2. My husband/ intimate partner 3. Both mutually 4. The whole family	[-------]	

Thank you very much for you time and valuable inputs!

Appendix 2: FGD Guide (1)

Introduction: My name is _____. I am a research scholar (student) at AAU, specializing in food security and nutrition. I am currently at the stage of undertaking a research project to fulfill the requirements for my Doctoral Degree. My research objective focuses on exploring the implications of the SHGA to household food security in Debre Markos town and its surrounding rural areas. The reason that instigates me to target on this topic is my personal experience as field practitioner for more than a decade and absence of scientific evidences that document the implication of the SHGA to food security in the country and study area so far. Therefore, this focus group discussion is prepared for selected SHGs, Cluster Level Associations and the Federations found in

Debre Markos Town and surrounding rural areas. The following general FGD guiding questions is developed for SHG members.

Instruction: This is an open-ended discussion so that you can freely move around the role of SHG approach to food security and women empowerment. The discussion is expected to take about 90 minutes. Possible quotes are taken as a group, not at individual level. No individual names, telephone, email, physical addresses or other personal identifiers will be included in the report.

Consent for recording: In order to get your ideas as they are when writing my thesis, I would like to record your discussions in voice record. Would you allow me to record your discussions?

i) Yes
ii) No

Guiding question for discussion

1. FGD participants: Location _____

SN	Name	Age	Education	Marital status	Family size	Employment status		Telephone No.
						Before SHG	Current	
1								
2								
3								
4								
5								
6								
8								
9								
10								

2. Number of members (current and inception phase)
3. Year of establishment
4. Structure and governance
5. Rules, regulations and guiding principles
6. Your vision, mission and objectives
7. Your regular functions/activities as a group (how often do you meet and what do you do in each meeting)
8. What are your personal regular daily (24 hour) activities/routine other than SHG meeting and special days?

Milestones	Activity list	Duration of work (Time)	Remark
Wake-up at:			
Activity 1:			
Activity 2:			
Activity 3:			
Activity 4:			
Activity 5:			
Activity 6:			

Sleeps at:		

9. Employment pattern

Job types	Before SHG	Current	Remark

10. How do you perceive (attitude) the SHG approach to the ultra-poor women?
    a. Your attitude when forming/joining the SHG
    b. Your current attitude to the approach
11. What are the typical meals of your household?

SN	Meals	Food items	Ingredients	Remarks
1	Breakfast			
2	Lunch			
3	Snack			
4	Dinner			
5	Occasional			

12. What are the typical ingredients of the following meals in your household?

Components of a meal	Major ingredients	Condiments	Remarks
Wats (Sauce) for fasting			
Wats (Sauce) for non-fasting			
Injera			
Drinks (water, milk, beer, alcohol, etc.)			
Others, specify			

13. How do you evaluate your households in terms of the following food security and nutrition criteria?

Criteria	Score (10 points)	Remarks
Food secured		
Mildly food insecure		
Moderately food insecure		
Severely foo insecure		

14. What measures does your household take during food shortage periods?

Strategies in their order of importance	Frequencies
0. Reduced quality and quantity of food	
1. Passing food	
2. Renting and selling assets (ox, cow, land)	
3. Borrowing (money and/or grains)	
4. Migration including child labor	
5. Begging (remittance, food, cloth)	
6. Scavenging food and cloths	
7. Working for food and cloth (exchange)	

8. Other illicit activities (mention)	

15. If yes, what factors enable your household to be food secured?
16. How does your access to internal lending (loan) help you improve your HH income?
17. How does your saving in the SHG help you improve your HH income?
18. How do the SHGA and your membership help you improve your HH income?
19. Your dreams
20. Remaining challenges
21. Policy and operational level implications of your achievements and remaining challenges
22. Recommendations

Appendix 3: FGD Guide (2)

Introduction: My name is _____. I am a research scholar (student) at AAU, specializing in food security and nutrition. I am currently at the stage of undertaking a research project to fulfill the requirements for my Doctoral Degree. My research objective focuses on exploring the implications of the SHGA to household food security in Debre Markos town and its surrounding rural areas. The reason that instigates me to target on this topic is my personal experience as field practitioner for more than a decade and absence of scientific evidences that documented the implications of the SHGA to household food security in the country and study areas so far. Therefore, this focus group discussion is developed for community members (women) who are not organized in the SHGs identified through relevant participatory rural appraisal methods (wealth ranking and social mapping) to serve as control groups for this research.

Instruction: This is an open-ended discussion so that you can freely move around your activities, your participation in household income generation, domestic activities and household decision-making practices and the food security situation of your households and drivers of food insecurity (if any). The discussion is expected to take about 90 minutes. Possible quotes are taken as a group, not at individual level. No individual names, telephone, email, physical addresses or other personal identifiers will be included in the report.

Consent for recording: In order to get your ideas as they are when writing my thesis, I would like to record your discussions in voice record. Would you allow me to record your discussions?

i) Yes
ii) No

Guiding question for discussion

1. Number of participants: Location _____

SN	Name	Age	Education	Marital status	Family size	Employment status		Telephone No.
						Before SHG	Current	
1								
2								

3								
4								
5								
6								
7								
8								
9								
10								

2. How many of you are members of local economic groups (like Iqub, SACCO)? ___
3. How many of you do you have close friends around you to consult your vital issues? ___
4. When and how do you meet with other women/people to discuss on your common (social, economic)?
5. What are your regular daily (24 hour) activities/routine other than special days?

Milestones	**Activity list**	**Duration of work (Time)**	**Remark**
Wake-up at:			
Activity 1:			
Activity 2:			
Activity 3:			
Activity 4:			
Activity 5:			
Activity 6:			
Sleeps at:			

6. Current employment type

Job types	**Number**	%	**Remark**

7. How do you explain yourself in the following activities?
    a. Social, economic and environmental protection activities/works
    b. Children protection and household management
    c. Participation in community activities (like campaigns, celebrations)
    d. Household decision-making power (children's education, healthcare including family planning, asset acquisition and control, what foods to prepare for the family, etc.)
    e. Asset acquisition and household food security
8. Do you think your household is food secured (i.e., have access to food items year-round)?
9. If yes, what factors enable your household to be food secured?
10. Your dreams
11. Your life challenges
12. Recommendations (what do you think others' can do so that you can improve your situation)

Appendix 4: KII Guide (1)

This tool is prepared for concerned government authorities at Kebele, Woreda and Zone levels (administration offices, women, children and youth affairs, micro and small enterprises development)

Introduction: My name is _____. I am a research scholar (student) at AAU, specializing in food security and nutrition. I am currently at the stage of undertaking a research project to fulfill the requirements for my Doctoral Degree. My research objective focuses on exploring the implications of the SHGA to household food security in Debre Markos town and its surrounding rural areas. The reason that instigates me to target on this topic is my personal experience as field practitioner for more than a decade and absence of scientific evidences that document the implications of the SHGA to household food security in the country and study area so far. Therefore, this key informant interview guide is prepared for your organization as one of the relevant agencies working with SHGs to create jobs, income diversification, women empowerment and household food security.

Instruction: This is an open-ended interview so that you can freely move around your organizational role in the area of employment creation, income diversification, women empowerment, women's social and economic participation and their roles in household food security. The interview is expected to take about 60 minutes. Possible quotes would be taken from you, if you allow me, so that our discussions can be verified by others. However, no personal identifiers will be included in the report.

Consent: In order to get your ideas as they are when writing my thesis, I would like to record your discussions in voice record. Would you allow me to record your discussions?

i) Yes
ii) No

Guiding questions for the interview

1. Location _____
2. Name _____
3. Sex _____
4. Organization _____
5. Position held _____
6. Kindly tell about the overall food security situation of the local people here (if possible, number of people who are food self-sufficient and those being supported by PSNP)
7. If food security is a concern, what do you think are the reasons for food insecurity?
8. Kindly explain government's programs that target on food security
9. Who other stakeholders work targeting on food security at household level and what are their programs?
10. Would you please tell me about SHG approach, its objectives, structure and its functions?
11. Please tell me the extent to which the SHG approach is contributing to the food security situation of the poor women. Support your discussion by examples, if possible.

12. What do you think are the determinants of household food security within the SHGA?
13. Explain if SHG approach has enhanced women empowerment and women empowerment positively influences household food security.
14. As compared to other similar development, food security and women empowerment approaches (like cooperative and SACCO), how do you explain the relevance and contribution of the SHG approach to food security of the poorest women?
15. If you observed difference, what do you think is the main reason(s)?
16. What are the implications of the SHG approach to grassroots community, government and development practitioners?
17. What do you think are the persistent challenges (policy to operational level) of the local community to ensure its food security?
18. What policy and operational challenges are hindering the SHG approach from helping the poor to become organized and come out of food insecurity and inequality?
19. What do you recommend to improve the food security situation of the local people in your area?

Appendix 5: KII Guide (2)

Introduction: This tool is prepared for formal financial intermediaries (like ACSI, RuSACO and Harbu MFI) that are working with SHG structures through credit linkages.

Introduction: My name is _____. I am a research scholar (student) at AAU, specializing in food security and nutrition. I am currently at the stage of undertaking a research project to fulfill the requirements for my Doctoral Degree. My research objective focuses on exploring the implications of the SHGA to household food security in Debre Markos town and its surrounding rural areas. The reason that instigated me to target on this topic is my personal experience as field practitioner for more than a decade and absence of scientific evidences that document the implications of the SHGA to household food security in the study areas so far. Therefore, this key informant interview guide is prepared for your organization as one of the relevant agencies working with SHGs focusing on financial service provisioning that stimulate jobs creation, household income diversification, women empowerment and household food security.

Instruction: This is an open-ended interview so that you can freely move around your organizational role in the area of financial service provision and its implications on employment creation, household income diversification, women empowerment, women's social and economic participation and their roles in household food security. The interview is expected to take about 60 minutes. Possible quotes would be taken from you, if you allow me, so that our discussions can be verified by others. However, no personal identifiers will be included in the report.

Consent: In order to get your ideas as they are when writing my thesis, I would like to record your discussions in voice record. Would you allow me to record your discussions?

i) Yes
ii) No

Guiding questions for interview

1. Location _____
2. Name _____
3. Sex _____
4. Organization/institution _____
5. Position held _____
6. Years of service in this organization _____
7. What financial products/services are you giving now?
8. Who are actually your clients?
9. I heard that SHGs/CLAs are one of your clients. Please tell me about this group of clients and their relevance and significance to your institution.
10. Kindly tell me the major clients by number and amount of money they saved and borrowed.

SN	Client category	Number	Saving mobilized	Money borrowed	Credit worthiness as measured by % of arrear
1	SHG members				
2	SME members				
3	Individuals				
4	Other organizations				
5					
6					
7					
8					

11. Can you tell me the purposes of SHG loans as compared to others' loans?
12. How do you explain this in terms of food security?
13. Kindly explain me the relationship among the SHG approach-women empowerment-access to credit-household food security.
14. If you think your institution (credit facilitator) contributes to government's effort to food security, how do you explain this relating with SHG (poor women) lending?
15. What policy bottlenecks do you restrict from lending to SHGs (poor women or group loan)?
16. What do you recommend to improve your relationship with the SHG approach in general?

Appendix 6: KII Guide (3)

Introduction: This tool is prepared for Non-Governmental Organizations and their consortiums assisting the formation and management of SHG approach in Ethiopia.

Introduction: My name is _____. I am a research scholar (student) at AAU, specializing in food security and nutrition. I am currently at the stage of undertaking a research project to fulfill the requirements for my Doctoral Degree. My research objective focuses on

exploring the implications of the SHGA to household food security in Debre Markos town and its surrounding rural areas. The reason that instigated me to target on this topic is my personal experience as field practitioner for more than a decade and absence of scientific evidences that documented the implications of the SHGA to household food security in the study areas so far. Therefore, this key informant interview guide is prepared for your organization as one of the relevant agencies working with SHGs focusing on its formation, management, capacity development and institutional linkage towards institution building and creating enabling environment.

Instruction: This is an open-ended interview so that you can freely move around your organizational role in the area of Peoples' institution building and capacity building and its implications on employment creation, household income diversification, women empowerment, women's social and economic participation and their roles in household food security. The interview is expected to take about 60 minutes. Possible quotes would be taken from you, if you allow me, so that our discussions can be verified by others. However, no personal identifiers will be included in the report.

Consent: In order to get your ideas as they are when writing my thesis, I would like to record your discussions in voice record. Would you allow me to record your discussions?

i) Yes
ii) No

Guiding questions for interview

1. Location _____
2. Name _____
3. Sex _____
4. Name of the organization _____
5. Position held _____
6. Briefly tell me about your organization (establishment, vision, values, operational areas, programs)
7. Kindly tell me about the history of SHG approach in Ethiopia
8. When did you adopt/start the current SHG model and why you adopted it?
9. Please give me a summary of SHG profile focusing on your organization's performance

Year	Regions	Woredas/towns	SHGs	Members	Saving	Loan	CLAs	Federations
2002								
2003								
2004								

10. How do you get the relevance and contribution of the SHG approach to your organizational vision and value?
11. What is your perception/attitude to the SHG approach now and at the beginning?

12. How do you evaluate (support with empirical evidences: reports and cases) the contribution of the SHG approach from women empowerment and food security perspectives?
13. What are the challenges (policy and operational level) that hindered the SHG approach from unleashing human potentials and decouple them from the cycle of food insecurity?
14. What do you think are the root causes of the above challenges?
15. What do you recommend to address the above challenges?

Appendix 7: Observations and case story guiding questions (SHG members and non-members)

Introduction: My name is _____. I am a research scholar (student) at AAU, specializing in food security and nutrition. I am currently at the stage of undertaking a research project to fulfill the requirements for my Doctoral Degree. My research objective focuses on exploring the implications of the SHGA to household food security in Debre Markos town and its surrounding rural areas. The reason that instigated me to target on this topic is my personal experience as field practitioner for more than a decade and absence of scientific evidences that document the effects of SHGA on household food security so far. Therefore, this key informant interview guide is prepared for your organization as one of the relevant agencies working with SHGs focusing on financial service provisioning that stimulate jobs creation, household income diversification, women empowerment and household food security.

Instruction: This is an open-ended interview so that you can freely move around your organizational role in the area of financial service provision and its implications on employment creation, household income diversification, women empowerment, women's social and economic participation and their roles in household food security. The interview is expected to take about 60 minutes. Possible quotes and photos would be taken from you, if you allow me, so that our discussions can be verified by others. However, no personal identifiers will be included in the report.

Consent: In order to get your ideas as they are when writing my thesis, I would like to record your discussions in voice record, quote your words and take photos. Would you allow me to record your discussions?

i) Yes
ii) No

1. Kindly tell me about your (and your family) social relations, networks and support system
2. Please share me your family food security situation in the last three years
3. What property/asset/income generating activities do you have that you can mainly decide on?
4. Kindly tell me how your family members, especially you and your husband, make decisions on critical family affairs (income, expenditure, child rearing and social relations)
5. Kindly tell me your and your husband's roles in domestic (reproductive) and economic activities

6. What was the general living condition (life situation) before the SHG program?
7. Kindly explain me your current living condition (life situation) comparing with the before SHG situation
8. What do you think are the critical factors (determinants) for your improved living condition (food and nutrition security) and how are they related to the SHG approach?
9. Kindly tell me your family's pressing problem/issue at the moment that you want to address soon
   Tell me what you want to become in the coming three years

Appendix 8: Summary of key development theories

Development theories	**Purpose**	**Strategies/core points**	**Sources**
Modernization (since 1950s)	Moving developing nations into a more sophisticated level of development	Social, economic and cultural reforms (institutional structures) of developing countries based on the Western development model.	Shareia (2015) Willis (2005)
Neoliberalism	Free-market economy	The economic activities shall be dominated by the private sector, not by states. Grassroots efforts are important, development should be sustainable and connecting gender with development.	Willis (2005), Springer, *et al*., (2016)
World Systems	Socio-cultural and political (state) reforms	Capitalism is the dominant system, relations between countries (core, semi and periphery), cultural and social system as problems	Shareia (2015)
Globalization (since 1970s)		Global integration of the World economic transactions, Western-centric, communication, technology, and ties.	Shareia (2015)
Dependency or post colonialism	Revolution of developing nations	First World and imperialism as causes of the problems	Shareia (2015)
Post-development	Eurocentric model	Indicators and definitions of	Escobar

Development theories	Purpose	Strategies/core points	Sources
	of economic and political developments	development are based on European and Northern countries' standards, aid and technical assistance as means to help developing countries to attain development indicators.	(1995)
Endogenous or new growth theory	Economic growth model that focuses on human capital development, not drive by exogenous technologies	Persistence growth is determined by the internal production system, not external or exogenous factors, there is increasing returns to scale, not diminishing return	Todaro & Smith (2015)

Appendix 9: Curriculum Vitae

i) Personal Details

Name	Adane Yenealem Worku; Sex: Male
DoB	December 15/1975
Nationality	Ethiopian
Languages	
Amharic	(Mother tongue)
English	Proficient in reading, writing, speaking and listening

ii)Education and Training

- PhD in Development Studies, specialized in food security and development from Addis Ababa University, College of Development Studies
- MA in Regional and Local Development Studies (2008) from Addis Ababa University, College of Development Studies
- BA degree in Educational Psychology (1998) from Addis Ababa University, Department of Psychology
- Several national and international training certificates on monitoring and evaluation, child rights and child protection, Women Empowerment through SHG Approach, DRR, project cycle management, emergency response

iii) Work experience

Overall, above 26 years of work experience. First employment started in July 1998 immediately after graduation.

- Founder and manager of Connect Development and Training Consultants PLC (since August 2012). From August 2012 to date, I am fulltime manager and consultant at Connect Development and Training Consultants PLC.

- **Monitoring and Evaluation Manager for Organization for Child Development and Transformation (CHADET),** Addis Ababa, Ethiopia (2011 - 2012)
- March 2004-March 2009 at Facilitator for Change (FC)
    - 2010-2011 as programs coordinator. Major roles and responsibilities were developing monitoring and evaluation systems, tools and procedure, developing various winning project concept notes and proposals along with impact indicators using a logical framework approach/Result Based Management. Staff capacity development, developing training manuals and preparing program reports. Core intervention areas of the organization were women empowerment through SHGA, identifying, reunifying and supporting vulnerable children, street children and child laborers and supporting unemployed and rural landless youth through vocational and business skill training and creating job opportunities and rural livelihoods.
    - Program officer for SHGA and women empowerment programs. Key roles and responsibilities were supporting projects and enhancing the project implementation and reporting capacities of project staffs. Project proposal writing, compiling donor and government reports and participating in the decision-making process of the organization (as a management team member)
- November 1999-2004 at Jerusalem Children and Community Development Organization
    - Project coordinator at JeCCDO (2003-2004). Key roles and responsibilities were administering and managing integrated community development project aimed at empowering vulnerable children, marginalized women and men in the project area, documenting and compiling project performances, producing monitoring and progress reports to donors and government stakeholders, organizing beneficiary communities into economic and social groups, liaison with local government partners and other NGOs, provide various tailor-made trainings for community facilitators
    - Social position at JeCCDO (1999-2003). The works of the organization were de-institutionalizing orphanage children from Debre-Birhan Orphanage center and
- July 1998-June 1999 (MoE) with summer training on effective counseling techniques

iv) Consultancy, research, training and training materials development

- Project and program evaluations
    - **Over 75 Program/project midterm and final evaluations**
    - **Over 11 Impact Assessments focusing on** Livelihoods of the drought affected people in Arsi, impact of malt barley in rural livelihoods and the impact of learn for work project on youths 'livelihood skills, self-confidence and job creation
    - **Over 18 Baseline Studies focusing on** the Community Conversation Program for the Prevention of Irregular Migration from Ethiopia, protection of Girls from Child marriage, FGM and sexual violence in selected Woredas of Oromia, irregular migration in Ethiopia, SNNPR and Amhara Regions, Community Based Support for Orphans and Vulnerable Children in Ethiopia, Water, Sanitation and hygiene (WASH) in Ethiopia with particular focus on selected zones and Woredas of Afar National Regional State, Sexual and Reproductive Health and Rights in Ethiopia (ICCO-Kampala), honey value chain development (FC/Oxfam GB) and quality education in primary schools in Ethiopia.
- Researches and surveys
    - **Surveys include** Gender Gap Assessment, Gender-Responsive Budgeting in the Implementation of Building Back Better Plan in the Education Sector, Gender audit and gender analysis for MoTI, ESI and NMIE, national survey (targeted in six regions) on knowledge, attitude and practices of in and out of school youth on Irregular Migration, national surveys on SRHR and Gender Mainstreaming in refugees and drought affected areas of Ethiopia, gender, social development and LED specialist for its UIIDP program initiative in 32 cities of Amhara National Regional State, a national survey on "Non-Financial (BDS) needs of

small and medium manufacturing enterprises commissioned, National Biogas Users' Survey commissioned by MoIE, Knowledge, Attitude and Practice (KAP) survey of in and out-of-school youth on irregular migration in Ethiopia

- **Researches** on the enhancing informed migration decision: Community Conversation as a tool to prevent unsafe migration in Ethiopia, Risky Migration and Human Trafficking in selected Woredas of North Gondar Zone, the contributions of community conversation to prevent irregular migration in four big regions of Ethiopia, contribution of Self Help Groups for Livelihood Improvement of Women Living under extreme Poverty in partnership with the Ethiopian Economists Association (research material published), roles and challenges of CBOs in the implementation of ECCE policy: the case of Addis Ababa (research paper published), added values of volunteer center in higher learning institutions for the development of sustainable culture of national volunteerism: the case of Addis Ababa University volunteer center, assessment of gaps and challenges (research paper published) and situation of comprehensive sexuality education in Ethiopia.
- Strategic and Program Plans, Policies and Guidelines
- Documentation of Best Practices
- Developing Training Manuals, Translations and Providing Trainings