

**MICROFINANCE SERVICES, FINANCIAL LITERACY AND FINANCIAL
HEALTH OF WOMEN MEMBERS OF SELECTED MICROFINANCE
BANKS IN KENYA**

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DECLARATION

DECLARATION BY CANDIDATE

I hereby declare that this thesis is my original work and has neither been presented nor submitted either in the same or in different form to any other university for academic qualification.

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DEDICATION

This thesis is dedicated to my family with special mention of my husband Mr. Isaac Momanyi and my children; Hollyne Givens, White Loma, Lyte Gladden and Liora Brielle who have consistently supported me in this journey morally, socially and financially and given me the motivation to press on with my studies to this end.

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TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
TABLE OF CONTENTS	v
LIST OF TABLES	x
LIST OF FIGURES	xi
OPERATIONAL DEFINITION OF TERMS.....	xii
ABBREVIATIONS AND ACRONYMS.....	xiv
ABSTRACT.....	xv
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background of the Study	1
1.1.1 Financial Health of Women	4
1.1.2 Microfinance Services	6
1.1.3 Financial Literacy	12
1.1.4 Women Members of Microfinance Banks	14
1.2 Statement of the Problem.....	17
1.3 Objectives of the Study.....	19
1.3.1 General Objective	19
1.3.2 Specific Objectives	19
1.4 Research Hypotheses	20
1.5 Significance of the Study.....	21
1.6 Scope of the Study	21
1.7 Limitations of the Study.....	22
1.8 Organization of the Study	23

CHAPTER TWO	24
LITERATURE REVIEW	24
2.1 Introduction.....	24
2.2 Theoretical Review	24
2.2.1 Empowerment Theory	24
2.2.2 Finance Growth Theory	26
2.2.3 The Grameen Bank Micro-credit Model.....	27
2.3 Empirical Review.....	28
2.3.1 Micro-Credit Services and Financial Health.....	28
2.3.2 Micro-savings Services and Financial Health.....	31
2.3.3 Micro-insurance Services and Financial Health	34
2.3.4 Financial Literacy and Financial Health	37
2.4 Summary of Empirical Literature and Research Gaps	41
2.5 Conceptual Framework	44
CHAPTER THREE	48
RESEARCH METHODOLOGY	48
3.1 Introduction.....	48
3.2 Research Philosophy	48
3.3 Research Design.....	49
3.4 Target Population.....	49
3.5 Sampling Design and Sample Size	50
3.6 Empirical Model	52
3.6.1 Testing for Moderation	53
3.7 Operationalization and Measurement of Variables.....	54
3.8 Data Collection Instrument	55
3.9 Data Collection Procedure	56

3.9.1 Pilot Test	56
3.9.2 Validity of the Research Instrument	57
3.9.3 Reliability of the Research Instrument	58
3.10 Data Analysis and Presentation	58
3.11 Diagnostic Tests	59
3.11.1 Normality Test	59
3.11.2 Test for linearity	60
3.11.3 Test for Multicollinearity	60
3.11.4 Test for Homoscedasticity	61
3.12 Ethical Considerations	61
CHAPTER FOUR.....	63
RESEARCH FINDINGS, INTERPRETATION AND DISCUSSION	63
4.1 Introduction.....	63
4.2 Response Rate	63
4.2.1 Reliability Test Results	64
4.2.2 Validity Test Results	64
4.3 Demographic Characteristics	65
4.3.1 Marital Status	65
4.3.2 Highest Level of Education	66
4.3.3 Age of the Respondents	67
4.3.4 Source of Income	68
4.3.5 Monthly income in Ksh	69
4.4 Micro-Credit Services	70
4.5 Micro-Savings Services	72
4.6 Micro-Insurance Services	73
4.7 Financial Literacy	75

4.8 Financial Health	76
4.9 Diagnostic Tests.....	77
4.9.1 Normality Tests.....	77
4.9.2 Linearity Test	79
4.9.3 Multicollinearity Test.....	79
4.9.4 Homoscedasticity Test	80
4.10 Correlation analysis	81
4.11 Regression Analysis.....	82
4.12 The moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya	86
4.13 Hypothesis Test Results	90
4.14 Discussion of Findings.....	92
4.14.1 Effect of Micro-credit services on financial health among women members of selected microfinance banks in Kenya.....	92
4.14.2 Effect of Micro-saving services on financial health among women members of selected microfinance banks in Kenya.....	93
4.14.3 Effect of Micro-insurance services on financial health among women members of selected microfinance banks in Kenya.....	93
4.14.4 Moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya.....	94
CHAPTER FIVE	96
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	96
5.1 Introduction.....	96
5.2 Summary	96
5.2.1 Effect of Micro-credit services on financial health among women members of selected microfinance banks in Kenya	97

5.2.2 Effect of Micro-saving services on financial health among women members of selected microfinance banks in Kenya	97
5.2.3 Effect of Micro-insurance services on financial health among women members of selected microfinance banks in Kenya	98
5.2.4 Moderating Effect of Financial Literacy on the Relationship between Micro Finance Services and Financial health of Women Members of Selected Microfinance Banks in Kenya	98
5.2.5 Financial Health among Women Members of Selected Microfinance Banks in Kenya	98
5.3 Conclusion	99
5.4 Recommendations	101
5.5 Suggestions for Further Studies	104
REFERENCES.....	105
APPENDICES	113
APPENDIX I: LETTER OF INTRODUCTION	113
APPENDIX II: QUESTIONNAIRE	114
APPENDIX III: MICROFINANCE BANKS 2022.....	119
APPENDIX IV: APPROVAL OF RESEARCH PROPOSAL.....	120
APPENDIX V: RESEARCH AUTHORIZATION	121
APPENDIX VI: RESEARCH PERMIT	122

LIST OF TABLES

Table 2.1. Summary of Literature and Research Gaps	41
Table 3.1. Sample Distribution	52
Table 3.2. Operationalization and Measurement of Variables	55
Table 4.1 Response Rate.....	63
Table 4.2 Reliability Test Results.....	64
Table 4.3 KMO and Bartlett's Test	65
Table 4.4 Age of the Respondents	68
Table 4.5 Monthly income in Ksh	70
Table 4.6 Micro-Credit Services.....	71
Table 4.7 Micro-Savings Services	72
Table 4.8 Micro-Insurance Services	74
Table 4.9 Financial Literacy	75
Table 4.10 Financial Health.....	77
Table 4.11: Shapiro-Wilk Test of Normality.....	78
Table 4.12: Linearity Test.....	79
Table 4.13: Multicollinearity Test	80
Table 4.14: Test for Homoscedasticity	81
Table 4.15. Correlations.....	82
Table 4.17: Model Summary	83
Table 4.18: ANOVA of the Regression.....	84
Table 4.19: Coefficient of Regression	85
Table 4.20: Moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya	87
Table 4.21: Goodness-of-Fit ANOVA.....	88
Table 4.22: Beta Coefficients	89

LIST OF FIGURES

Figure 2.1. Conceptual Framework	46
Figure 4.1: Marital Status	66
Figure 4.2: Highest Level of Education	67
Figure 4.3: Source of Income.....	69
Figure 4.4: Moderating Path Diagram	90

OPERATIONAL DEFINITION OF TERMS

Financial Health: Financial health refers to the overall well-being and stability of an individual's or entity's financial condition. It encompasses various aspects of financial management, including income, expenses, assets, liabilities, and overall financial behavior. An entity is considered financially healthy when it can effectively meet its financial obligations, plan for the future, and withstand unforeseen economic challenges without compromising its long-term sustainability.

Financial Literacy: Financial literacy refers to the ability of individuals to understand and use various financial skills, including managing personal finances, budgeting, and making informed financial decisions. It involves possessing the knowledge and skills necessary to navigate the complexities of the financial system, enabling individuals to effectively manage their money, plan for the future, and achieve financial well-being.

Financial Services: Includes a wide variety of money-handling firms as well as certain government-sponsored organizations, and provides a variety of economic services. In this study the financial services is focused on include microcredit services, microfinance services, micro insurance services, micro saving services.

Micro Insurance Services: Microinsurance services refer to insurance products specifically designed to meet the unique needs and

financial capacities of low-income individuals, micro-entrepreneurs, and those living in economically vulnerable communities. Microinsurance aims to provide affordable and accessible risk mitigation solutions tailored to the circumstances of individuals who may face challenges in obtaining traditional insurance coverage.

Micro Saving Services: Micro savings may be defined as savings created by persons with low incomes, as savings kept by institutions that focus on micro saves, or as savings of any other size maintained by low-income or impoverished people.

Microcredit Services: Includes the financial services leading to advancing small amounts of money at low interest to low income customers to expand businesses.

Microfinance Services: Comprises a wide range of financial aids for low-income business owners, such as microloans, savings accounts, micro-leasing, micro-insurance, and money transfers.

Women Financial Health: Refers to the overall well-being and stability of female clients within the microfinance sector. It encompasses various aspects such as increased savings, increased credit rating and improved insurance cover.

ABBREVIATIONS AND ACRONYMS

ASCA	Accumulating Savings and Credit Associations
CBK	Central Bank of Kenya
FL	Financial Literacy
MFB	Microfinance Banks
MFS	Microfinance Services
MGRG	Merry-Go-Round Groups
MIX	Microfinance Information eXchange
NACOSTI	National Commission for Science, Technology and Innovation
OECD	Organization for Economic Co-operation and Development
ROSCA	Rotating Savings and Credit Associations
SAARF	South African Advertising Research Foundation
SACCOs	Savings and Credit Cooperative Societies
SASRA	SACCO Societies Regulatory Authority
SDGs	Sustainable Development Goals
SMART	Specific, Measurable, Attainable, Relevant, and Timely
SME	Small and Medium Enterprises
SPSS	Statistical package for social science
SSA	Sub Saharan Africa
VIF	Variance Inflation Factor

ABSTRACT

Financial health of women has been identified by the World Bank as key poverty reduction constituent elements, as they are important in aiding economic development goals. Gender mainstreaming is also made a priority in financial assistance, with the World Bank in process of implementing an ambitious strategy to this effect. Microfinance makes use of a wider variety of assets and household items as collateral to lending facilities. Despite the fact that individuals with low incomes are unable to get access to conventional financial services such as credit, savings, and insurance, microfinance companies successfully bridge this gap by offering these services to these individuals. The main objective of this study was to assess the effect of microfinance services, financial literacy and financial health of women members of selected microfinance banks in Kenya. Specifically, the study sought to examine the effect of micro-credit services on financial health of women members of selected microfinance banks in Kenya; to establish the effect of micro savings services on financial health of women members of selected microfinance banks in Kenya; to find out the effect of business micro-insurance services on financial health of women members of selected microfinance banks in Kenya and to determine the moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya. The study was guided by empowerment theory, gender stratification theory, finance growth theory, and information asymmetry theory. The study adopted positivism philosophy to explore a true reality regarding financial health and use of microfinance services among women in Kenya as this cannot be changed by social actors. This research employed explanatory research design. The target population for this study comprised of 37,773 women members in women members of microfinance banks clients who currently hold active deposit accounts and active loan accounts in the 14 microfinance banks within in Kenya. The researcher adopted a combination of purposive and stratified sampling techniques to select women members of microfinance banks. The sample size was 384 respondents. The study concluded that micro-credit services have a positive significant influence on financial health of women members of selected microfinance banks in Kenya. The study also concluded that micro-saving services have a positive significant influence on financial health of women members of selected microfinance banks in Kenya. The study further concluded that micro-insurance services have a positive significant influence on financial health of women members of selected microfinance banks in Kenya. In addition, the study concluded that financial literacy significantly and positively moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya. The study recommends that there is a need for microfinance institutions to diversify their financial products beyond conventional micro-credit services. This study also recommends that there is a pressing need for targeted educational programs aimed at augmenting awareness and comprehension of micro-saving services among women beneficiaries. In addition, this study recommends that there is a critical need for targeted educational initiatives aimed at augmenting awareness and understanding of micro-insurance services among women beneficiaries.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to Johnson and Rogaly (1997), microfinance is a financial concept that is used to enable access to modest deposits and small loans by low-income people and families in both rural and urban places. Microfinance makes use of a wider variety of assets and household items as collateral to lending facilities. Despite the fact that individuals with low incomes are unable to get access to conventional financial services such as credit, savings, and insurance, microfinance companies successfully bridge this gap by offering these services to these individuals (Watkins, 2018). Additionally, in 2010, Ruth Stewart published a technical analysis that broadened the classification of microfinances to include micro-leasing for those with low incomes, micro-franchising, housing financing, and other financial services for those who are economically disadvantaged.

According to Stewart, Einstein, and Podolsky (2010), the establishment and growth of microfinance institutions throughout the world has the potential to have a wide variety of effects on the social and economic well-being of women. These effects may include improved income levels and greater control over money. Microfinance helps businesses achieve greater economic independence, access to networks and markets, access to capital that is both financial and technological, improved ability to make informed financial decisions, investment and savings, financial budgeting, improved ability to pay bills and afford basic necessities, continued high purchasing power, and the ability to pay off debts (Watkins, 2018). As an additional benefit, microfinance enables women to take part in the decision-making process about family

expenditures and to make contributions to the financial well-being and financial security of their families. Microfinance programs, as stated by Warui (2015), help women achieve more financial stability and break down hurdles that prevent them from obtaining formal financial services. These barriers include cultural barriers, the need for collateral, the need for paperwork, restricted mobility, and literacy levels.

As a result of their significance in contributing to the achievement of economic development objectives, the World Bank has recognized the financial health of women as one of the most significant component aspects in the fight against poverty (World Bank, 2015). For the purpose of providing financial assistance, gender mainstreaming is also made a priority, and the World Bank is now in the process of putting into action an ambitious plan to achieve this goal. The advancement of women's financial well-being is founded not only on the principle of social fairness, which is a path that should be pursued, but also as a means to other purposes. microfinance programs assist women improve their financial status, which in turn enhances economic growth, reduces poverty, and creates better leadership (Warui, 2015; Cheston & Kuhn, 1995). In regard to the latter, microfinance initiatives help women improve their financial standing. Despite the expansion of these institutions and the introduction of new financial products, there are certain financial institutions that choose to provide a smaller proportion of loans to women. In spite of the fact that they are participating in the same credit program and belonging to the same lending organization, the loans that are given to women are of a lesser amount when compared to the amounts that are extended to their male counterparts. This indicates that there is a wider societal prejudice against women.

According to Fadhl (2019), 14.2 million of the world's poorest women now have access to financial services, which enables

them to invest and manage their own businesses. This is made possible by specialized microfinance organizations, also known as MFIs. For women who were unable to get loans from traditional financial institutions, microfinance has emerged as a viable alternative to traditional financial services. It is now more possible than ever before for economically disadvantaged women who have little or no access to the traditional banking system to better their economic position by obtaining microfinance services and cash transfers (Warui, 2015). Microfinance institutions are rapidly establishing a reputation for improving the financial health of women all over the world (Tedeschi, 2008). These institutions are distinguished by their ability to offer women with insurance schemes, modest loans, and platforms for little deposits.

Microfinance has made it possible for a number of female entrepreneurs in Bangladesh to launch firms that generate income, with the goal of increasing their assets and reducing their vulnerability (Hamada, 2010). When it comes to financing their micro- and small-sized firms, female entrepreneurs who have the goal of engaging in company are dependent on microfinance services. According to the findings of a study that was carried out in Jordan, Welsh (2019) discovered that microfinance assists vulnerable women in Jordan in achieving economic independence. As a consequence of this, the World Bank, in conjunction with the Central Bank of the country, provided loans totaling 120 million dollars to micro, small, and medium enterprises, with 87 percent of the beneficiaries being women (World Bank, 2017). According to Khan and Noreen (2012), the availability of microfinance has a beneficial influence on the empowerment of women, helps to the alleviation of poverty, and increases the social standing of women as a consequence of their higher income level. This was seen in Pakistan.

Microfinancing is often considered to be an effective method by which women may achieve economic autonomy. This is something that was discovered by Ifelunini (2012) and Wosowei (2012) in different research projects that were carried out in Nigeria. According to the findings of the research, giving Nigerian women access to micro-credit has improved their economic status by increasing their income, home ownership, savings, and quality of life. On the other hand, Nzembela and Mazambani (2015) conducted a study in South Africa and discovered that microfinance focuses on women because it is believed that women have a greater impact on the development of society. Therefore, the primary goal of microfinance services is to ensure that women have increased bargaining power.

1.1.1 Financial Health of Women

According to Weidaet Ahmad, Burhan, Madon, and Hamsan (2020), the term "financial health" refers to an all-encompassing examination of one's personal finances that includes the capability to satisfy fundamental requirements as well as the possibility to save money and accumulate wealth. Financial health, on the other hand, is defined by Rhyne (2020) as the relationship between one's personal endowments and one's capacity to use financial services and social safety nets. According to Lusardi and Mitchell (2008), the capacity to manage one's day-to-day money, the ability to invest in one's livelihood and future, and the ability to deal with risk are the three characteristics that are included in a multidimensional financial health index. This index is used to assess an individual's financial health. Due to the fact that it is a reliable method for assessing personal finances, this research makes use of the financial health measure that was proposed by Lusardi and Mitchell. This particular measure encompasses all three aspects. In terms of the capacity to make investments in one's life and future, a person is considered to be in a healthy financial position

when they are able to save money for their retirement years, save money for their productivity, and save money for future reasons (FinAccess Household Survey report, 2019).

When a person is able to raise a lump sum amount within a short period of time, often within three days, when they never go without medication, and when they also save money away for the future, they are said to be financially sound. This is because they are able to deal with risk. In a similar vein, the capacity to manage one's day-to-day finances is regarded to be a measure of one's financial health. This means that a person is able to afford their daily meals, plan for how they will allocate their money, and avoid having difficulties making money last (FinAccess Household Survey report, 2019). In addition, the survey revealed that the male population is more financially stable than the female population, with 24.4 percent representing the former and 19.2 percent representing the latter.

Jorgensen (2020) asserts that women are equally as self-assured as their male counterparts when it comes to the majority of financial duties, including budgeting, paying bills, paying off debts, and selecting insurance. The degree of confidence that women have in managing investments, on the other hand, is lower. It is important to note that around half of the population of women in any population are unable to handle investments. In spite of the efforts that have been made, this demonstrates that there is still a significant gender difference in the field of investment management concerning men and women. There is a significant correlation between a woman's level of educational attainment and her likelihood of having a healthy financial situation, according to research.

Nevertheless, other aspects, such as the number of hours worked and the availability of financial institutions, are also elements that contribute to a person's financial health

(Herath, Guneratne, & Sanderatne, 2015). Women who are employed full-time are equally as likely as males to hold financial goods, with the proportion of ownership differences being neither significant nor substantial. According to Graham and Warren (2011), these women are likewise guaranteed to be the owners of their occupational pensions, exactly as their male colleagues' pensions. Nevertheless, women who are jobless and typically have low incomes tend to have a smaller number of financial products. As a numerical measure of an individual's creditworthiness, a credit score is derived from the individual's credit history, payment habits, and other financial actions taken into consideration. It is commonly accepted that a higher credit score is related with improved financial well-being. This is because a higher credit score demonstrates competent credit management. Having a high credit score makes it easier to get advantageous financial conditions, such as reduced interest rates on loans and credit cards, which significantly contributes to the overall financial resiliency of an individual.

These four indicators, when taken together, provide a comprehensive perspective on a woman's financial well-being by evaluating her present financial situation, her savings habits, her ability to manage her debt, and her creditworthiness. By doing an analysis of these indicators, it is possible to ascertain whether or not she is capable of meeting her fundamental living expenditures, keeping a financial safety net for unexpected events, and properly meeting her debt responsibilities. Utilizing these measures on a consistent basis enables proactive financial planning and changes, which ultimately contribute to an improvement in overall financial health.

1.1.2 Microfinance Services

According to Watkins (2018), microfinance is a financial service that was developed for people with low incomes by traditional banks since these individuals were mostly

disregarded by these institutions. According to Dhakal (2016) and Warui (2015), microfinance services, which are also known as microcredit, microsavings, microleasing, and microinsurance, as well as money transfers, are all instruments that are utilized in development to assist the world's poorest people in growing their own businesses or starting their own businesses. Microfinance services, as defined by Khavul (2010), include a wide range of financial products and services, including credit, insurance, savings, mortgages, and retirement plans, which are aimed at small sums that are not covered by traditional financial institutions. According to Bernard, Kevin, and Khin (2016), it also include non-financial services that are centered on the development of skills and programs that provide assistance for microbusinesses.

According to Yunus (2007), the current acceptance of microfinancing can be traced back to the 1970s, when pioneering Bangladeshi companies such as Grameen Bank started to build the modern industry of microfinancing. A significant number of individuals with low incomes were refused services by conventional banks in Kenya throughout the 1980s, which led to the adoption of the micro-finance concept and its subsequent rise to prominence. In order to fill this void, microfinance banks came into existence. These banks offer a wide range of financial and non-financial services to Kenyans with low incomes as well as owners of micro , small , and medium-sized businesses. These services include microsavings, microleasing, microinsurance, and microtransfers. The goal of these banks is to encourage the growth of entrepreneurial endeavors and, as a result, contribute to the overall economic growth of the country (Bernard, 2015). Micro-finance banks, also known as MFBs, are dependable sources of credit for the majority of low-income families and small and medium-sized enterprises (SMEs) in Kenya's

rural and urban areas. This is due to the fact that low-income individuals have a need for credit, and the growth of SMEs has been on the rise. Since their beginnings, microfinance banks (MFBs) have made a substantial contribution to the empowerment and inclusion of women beneficiaries and their dependents in terms of financial matters (Kamau, 2010).

Women make up between 65 and 73.4 percent of the world's impoverished population. Between 2.1 and 2.7 billion people are included in this figure (UNDP, 2022). According to Senanayake and Premaratne (2006), microfinance has been acknowledged as a method that supports long-term economic growth in underdeveloped countries by expanding women's access to money. This is because microfinance helps women get access to financial resources. Microfinance movements have, during the course of their existence, endeavored to make use of novel organizational forms and creative contractual structures in order to lessen the risks and expenses associated with the provision of uncollateralized small loans (Khavul, 2010). Because of these recent changes, there has been an increase in the number of market-driven microfinance programs that aid in the expansion of the economy. It is for this reason that microfinance banks have been founded specifically for the purpose of providing services to members of society who are marginalized, especially women with low incomes.

Microfinance banks are mostly recognized for their conventional products, which include modest loans and savings accounts, as stated by Ekpete and Iwedi (2017). However, these banks also provide other services, such as insurance and money transfer for their customers. The authors Kirby and Watson (2008) state that microcredit has a significant influence on the degree to which women are able to obtain financial independence. Women are able to enhance their incomes via the use

of microcredit, which ultimately leads to the elimination of poverty. There is a consensus among the authors of Taiwo, Aregan, and Ailemen (2016), who state that micro-credit initiatives have a positive impact on the lives of women with very low incomes in places where they are implemented. The argument that they are making is that women in developing countries are disproportionately affected by severe poverty, and that one approach to assist them in climbing out of poverty is to provide them with access to micro-credit.

Similarly, Adabugah (2019) established that micro credit positively affects poverty reduction among women as proceeds from their enterprises are employed to grow their businesses, pay school fees for their children, and enhance their livelihoods by acquiring decent shelter, decent clothing and getting quality meals. Furthermore, microcredit organizations provide training to the people who benefit from their services in order to provide them an understanding of how to handle the capital of their enterprises. Adabugah (2019) came to the conclusion that microcredit helps women beneficiaries boost their profit margins by assisting them in maintaining and expanding their businesses, which ultimately leads to an increase in their income levels.

One of the most important variables in this investigation is micro-savings, which, according to Chikalipah (2018), is a measure of the total amount of micro-savings held by a certain microfinance institution. It was indicated that impoverished women need modest savings products more than credit, as stated by Collins, Morduch, Rutherford, and Ruthven (2010). Additionally, it was shown that micro-savings had a relatively greater effect on decreasing rural poverty and improving income flow (Burgess & Pande, 2005). According to Lianos and Pseiridis (2009), it has also been suggested that micro-savings might possibly encourage women to engage in

entrepreneurial activities for the simple reason that it is their major source of financing for business ventures. According to Dupas and Robinson (2013), there is a strong demand for items that are associated with micro-savings among the lower economic class.

As a result, the micro-savings services that are provided to women have a primarily financial purpose. These services provide women with a more secure alternative to storing their money at home, ensuring that they are included in the official financial system, and provide women with banking choices that are both inexpensive and economical. According to Lianos and Pseiridis (2009), women who retain their savings with microfinance banks are also able to borrow money at interest rates that are far lower than those offered by other mainstream financial institutions. This guarantees that women are able to maintain their financial stability at all times. It seems that the majority of women are eager to save money, as shown by the presence of this mechanism. Therefore, microsavings may be used to transform tiny, regular income flows, such as the daily revenues from food vending, into more substantial quantities that can be put to beneficial use. Therefore, microsavings programs place women and their families on the route to financial inclusion, which means that they will have access to adequate and affordable financial goods and services for an extended period of time, and they will be able to start the process of accumulating assets over the long term. It is the acquisition of assets that is thought to foster enhanced self-efficacy, which ultimately leads to the success of women in terms of their financial situation.

According to Churchill and McCord (2012), the majority of women with low incomes do their jobs in the informal sectors of the economy, where they often face the same kinds of hazards. On the other hand, the effects of the hazards often differ

significantly from one woman to another in terms of their financial circumstances. The purpose of microinsurance is to provide protection to consumers against risks of this kind, which, according to Radermacher and Brinkmann (2011), contributes to a reduction in the severity of poverty vulnerability. It is noted that 70% of the poor people globally are women, making women be the majority at the bottom of financial independence chain. With recurring premium payments that are proportional to the level of risk and the cost of that risk, micro-insurance protects women against specific dangers (Churchill et al., 2012).

The provision of financial services to low-income individuals and groups that would otherwise be unavailable to them owing to a lack of resources is what is meant by the term "microfinance." Small loans for working capital, which are also sometimes referred to as microloans or microcredit, are the principal product that the whole of microfinance organizations provide to their customers. A great number of microfinance companies provide a variety of services in addition to loans, including savings accounts, money transfers, and even insurance. Microcredit, micro-savings, and micro-insurance are only few of the services provided by microfinance institutions.

In contrast to traditional banking institutions, microfinance institutions exhibit a distinct approach by tailoring their financial products, particularly loans, to cater specifically to the unique requirements of women business owners. This targeted strategy facilitates improved access to microloans for businesswomen with lower incomes, empowering them to leverage financial resources for the growth and enhancement of their enterprises, ultimately contributing to improved bottom lines. A borrower's history of saving and their current savings rate are often taken into consideration by financial institutions when determining the size of a loan. A

borrower's ability to repay a loan is often based on their finances (Abiola, 2016). The ancestors of insurance, such as risk pooling and risk transfer, may be seen in the development of micro-insurance services (Richard, 2011). Cooperatives and credit unions, some of which established their own insurance firms, paved the way for the processes of micro insurance. In the past, micro-insurance was only able to provide credit life products that settled the loan balance in the case of the borrower's death.

1.1.3 Financial Literacy

According to Ademola, Musa, and Innocent (2019), the definition of financial literacy is the desire, self-assurance, and competence to apply financial understanding and knowledge in order to generate sound judgment across a variety of monetary contexts. This is done with the intention of ensuring one's financial soundness and allowing one to have knowledge of financial concepts and participate in economic life. As per the findings of Lusardi and Mitchell (2011), around one-third of the global population has a fundamental comprehension of the concepts that need to be used while making decisions regarding one's financial situation. The concept of financial literacy was conceived with the intention of assisting the people of society who have the least amount of knowledge to reach greater levels of financial stability, development, and involvement overall.

According to Mustafa, Mazhar, Asghar, Usmani, Razaq, and Anderson (2019), the majority of persons with low incomes, particularly women, are finding it more challenging to make educated decisions about financial products and services as the complexity of financial markets continues to increase by a significant margin. There is a possibility that difficulties may develop while attempting to get access to microfinance services such as leasing, savings, insurance, and personal loans. A significant number of individuals have defaulted on their loans due to the fact that

they are unable to meet their minimum payments or because they are required to borrow additional funds from a multitude of lenders in order to meet their financial obligations. In this scenario, women with low incomes are put in a more precarious position than they would otherwise be if microfinance inclusion does not partner with financial literacy in addition to assisting them.

By providing people with the necessary tools for predicting, assisting them in conserving money, and ensuring that they maintain their financial health, those who are financially literate provide themselves with critical tools. Women who are financially knowledgeable are thus good to the economy because they exert pressure on suppliers of financial services to innovate and improve their levels of efficiency, as well as to stimulate true competition (Lusardi & Mitchell, 2011). The capacity to build financial goals, good financial behaviors and attitudes, and the ability to make educated choices about financial products are some of the typical markers of financial literacy (Bongomin, Munene, Ntayi, & Malinga, 2017). Financial management skills and knowledge are also included in this category.

It has been shown that a person's degree of financial literacy has an effect on a variety of financial behaviors, including the management of debt, borrowing habits, investment strategies, and saving rates. Research conducted by Lusardi and Mitchell (2014) indicates that those who possess a higher level of financial literacy have a greater likelihood of achieving financial stability. Literacy in topics pertaining to finances is associated with a healthy financial situation for a number of reasons. It is for this reason that those who are able to effectively arrange their financial matters are often the most financially literate. There is a pervasive lack of financial literacy among Kenyan women, which has been ascribed in part to the slow pace of financial

inclusion in Kenya (Mwathi, 2017). This is despite the fact that the microfinance business is constantly growing.

An evaluation of a project carried out by the World Bank also found that financial awareness training, which was directed toward both the family members receiving remittances and the overseas workers, resulted in improved financial competence, increased savings, and improved financial management (World Bank Group, 2015). As shown by the findings of the 2019 FinAccess Household Survey, a significant number of Kenyans are more inclined to depend on their own intuition when it comes to making significant financial choices, rather than seeking the advice of professionals. Despite the fact that other areas of the financial sector have been thriving in recent years, the microfinance business has been experiencing what is known as penetration inertia. A significant obstacle that has been highlighted is a lack of awareness about financial matters. The term "financial literacy" refers to the collection of abilities, knowledge, mentality, and behaviors that individuals need in order to create positive decisions about their finances and to better their own personal financial condition. Within the scope of this study, we will assess the amount of financial literacy possessed by the participants by using measures that include financial knowledge, financial behavior, and financial attitudes. In the course of the study, these three aspects will be investigated in order to determine the degree to which contemporary working women are acquainted with financial matters.

1.1.4 Women Members of Microfinance Banks

The women who are members of microfinance banks make up a group that is both broad and dynamic. They represent a wide range of economic activities and backgrounds. Women that fall into this category are often company owners, proprietors of small businesses, and those who are actively involved in activities

within their communities that generate money. At the moment, microfinance programs are being promoted as an essential strategy for reducing poverty and enhancing the economic stability of women (Bernard, Kevin, & Khin, 2016). Situations in which access to financial services facilitates the launch or growth of micro-enterprises may have far-reaching effects, such as more economic autonomy thanks to higher incomes and greater say over how those earnings are spent, gain access to global markets and networks, expanding one's horizons, knowledge, and opportunities for personal, professional, and political growth, raising awareness of women's economic contributions to their families, empowering women to have a voice in family financial choices and other matters, which in turn increases money spent on women's welfare and promotes more positive views of women in general (Chikalipah, 2018).

It is vital to transform the division of work and society, as well as to challenge conventional conceptions about men's and women's separate roles and responsibilities, in order to increase the economic security of women. Through the promotion of women's autonomy and the acknowledgment of differences in power relations women's financial health is a factor that contributes to the fulfillment of both tactical and strategic gender demands. This factor is determined by factors such as class, gender, age, and ethnicity. According to Adeoti, Gbadeyan, and Olawale (2015), in order for women to gain economic independence, they must first establish success in an economy that is controlled by males. Women-focused micro-finance schemes have become a fundamental pillar of donor poverty reduction programs in the 1990s as a result of initiatives taken by the Committee on Global Agriculture Policy (CGAP) and its member donor agencies. It is anticipated that this trend will continue into the next century. The "financial self-sustainability paradigm" is the

driving force behind this expansion. Otero and Rhyne (1994) provide the most comprehensive description of this paradigm. A significant portion of the inspiration for the Micro-Credit Summit Campaign, which was initiated in 1997, comes from this very same idea. According to Ademola, Musa, and Innocent (2019), the ultimate objective is to create programs that are capable of effectively competing with other private sector banking institutions and generating funds from international financial markets without requiring subsidies from development agencies.

It was not until quite recently that a significant portion of the optimism about the positive impacts of microfinance could be anticipated (Abiola, 2016). Many of the uplifting tales about the good impacts of microfinance that have arisen from various regions of the globe and helped considerably to the spread of microfinance from a handful of programs into a global phenomenon were the source of a major portion of the excitement that was expressed. As an example, there are the stories that are told over and over again of women and their families who are on the verge of being destitute and hopeless (Adabugah, 2019). However, once these women are given the opportunity to have access to credit, their circumstances begin to improve. The majority of the time, the ladies will only buy some yarn and sawing materials and perform simple crafts, or they will engage in any other business endeavor that is not particularly glamorous. However, they have already begun on a path that will eventually lead to their families being able to provide their children with better food, medical care, and educational opportunities. The landscape of microfinance institutions in Kenya is characterized by the active engagement of women, who represent a wide range of economic activities within their communities. This is a particularly noteworthy aspect of the landscape. A significant contribution to the nation's economic fabric is made by these women, who are often

company owners and entrepreneurs of small businesses. A culture of economic empowerment has been fostered in Kenya by microfinance institutions, which have carefully adapted their services to target the specific financial demands and obstacles that women experience.

1.2 Statement of the Problem

Microfinance banks emerged in response to the need for financial services among underserved and marginalized populations, particularly in developing countries like Kenya. Originating in the late 20th century, microfinance banks aimed to address the financial exclusion faced by low-income individuals, especially women, who lacked access to traditional banking services. These banks were established on the principle that providing small loans, savings accounts, and other financial products to the poor could empower them to improve their livelihoods, start or expand small businesses, and build assets. In Kenya, microfinance banks became increasingly prominent in the early 2000s as part of broader efforts to promote financial inclusion and poverty alleviation. With a focus on serving women members, who often face greater barriers to accessing formal financial services, microfinance banks in Kenya have played a crucial role in expanding financial access, enhancing financial literacy, and promoting the financial health of women clients. Understanding the impact of microfinance services on the financial health of women members is essential for assessing the effectiveness of these institutions and informing policies and programs aimed at promoting inclusive and sustainable development (CBK, 2017).

In several of Kenya's counties, unemployment is a significant problem that has to be addressed. While microfinance banks have made significant strides in providing financial services to women, there remains a need to assess the extent to which these services contribute to women's overall financial well-being and empowerment. While

financial literacy is a crucial component, women's financial health encompasses broader dimensions, including their ability to make informed financial decisions, manage financial resources effectively, and achieve financial goals that enhance their overall quality of life. However, existing research often overlooks the holistic nature of women's financial health, focusing primarily on access to credit and savings products. Thus, there is a gap in the literature regarding the specific mechanisms through which microfinance services impact women's financial health outcomes, such as their economic security, autonomy, and resilience to financial shocks (CBK, 2017).

Despite the fact that these studies all examined microfinance services and financial results in relatively diverse contexts, they all came to the same conclusions: there are consistent patterns. Researchers from Ghana, such as Alhassan, Hoedoafi, and Braimah (2016), investigated the influence that microfinance has on the prosperousness of enterprises that are owned and operated by women there. Microloans have the potential to boost the performance of enterprises that are owned by women, which is the most significant conclusion from this. Nevertheless, Ghana, and not Kenya, was the location where this study was collected. Alhassan (2016) conducted research in the Tamale Metropolis to investigate the impact of microfinance on the performance of small and medium-sized firms (SMEs) owned by women. The researcher discovered a positive association between the two factors. Nevertheless, a gap in the research was produced due to the fact that this study was not conducted in Kenya.

Monge (2016) investigated the effects that microfinance funding had on organizations that were classified as small and medium-sized businesses (SMEs) in Tanzania. The most significant finding was that microfinance had a positive impact on the amount of capital that was produced by businesses. However, Tanzania was chosen as the

location for the research rather than Kenya. Kanyare and Mungai (2017) conducted research on the topic of microfinance and its influence on small and medium-sized businesses (SMEs) in the county of Wajir in Kenya. It has been shown that a favorable correlation exists between the financial performance of small and medium-sized businesses (SMEs) and the ability to save money, have simple access to financial resources, and get training services. The survey did not focus specifically on women-owned firms but rather on small and medium-sized enterprises (SMEs) in general.

Thus although there has been some research on the effect of microfinance on economic success, most of these research has focused on microfinance in a narrowly defined set of countries. Earlier research focused on SMEs in general, not just those owned by women. Wajir County was among those studied, among others. Most of these studies were also conducted quite long ago, which is another factor motivating our investigation. As a result, there is a need for studies that examine the impact of microfinance services on women's financial health, and that's exactly what this study plans to do in Kenya.

1.3 Objectives of the Study

The study was guided by the following objectives

1.3.1 General Objective

The main objective of this study was to assess the effect of microfinance services and financial literacy on financial health of women members of selected microfinance banks in Kenya.

1.3.2 Specific Objectives

The specific objectives of the study were as follows:

- i) To examine the effect of micro-credit services on financial health of women members of selected microfinance banks in Kenya
- ii) To establish the effect of micro savings services on financial health of women members of selected microfinance banks in Kenya
- iii) To find out the effect of business micro-insurance services on financial health of women members of selected microfinance banks in Kenya
- iv) To determine the moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya

1.4 Research Hypotheses

To examine how each of the microfinance services affects financial health of women, the study was guided by the following null hypotheses:

- H₀₁:** Micro-credit services have no effect on financial health of women members of selected microfinance banks in Kenya
- H₀₂:** Micro-savings services have no effect on financial health of women members of selected microfinance banks in Kenya
- H₀₃:** Micro-insurance services have no effect on financial health of women members of selected microfinance banks in Kenya
- H₀₄:** Financial literacy does not moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya

1.5 Significance of the Study

Women in Kenya's microfinance banks and Kenya as a whole would benefit greatly from this study. The study's findings will aid the management of all businesses owned by women in making educated choices about funding, and hence, in improving the companies' financial success. The Central Bank of Kenya and other regulatory organizations may potentially benefit from this study. Commercial banks and micro credit organizations are only two of the many types of financial institutions that the CBK oversees. As a consequence, the study's findings will be useful to regulatory agencies in developing the most effective laws and regulations governing Microfinance institutions, particularly those that aim to alleviate the condition of women. The results of this study will also be used by academics and researchers in the future to expand the body of knowledge on the effects of microfinance services on women's financial well-being.

1.6 Scope of the Study

This study aimed to meticulously examine the impact of microfinance services on the financial health of women members associated with microfinance banks in Kenya. The specific focus of the investigation encompassed the discernible effects of micro-credit services, micro-savings services, and micro-insurance services on the financial health of women engaged with microfinance banks in Kenya. It is imperative to underline that the study was intentionally confined to women members, and the selected microfinance banks were those duly licensed by the Central Bank of Kenya (CBK). This deliberate selection criteria ensured a structured analysis within the regulatory framework.

The targeted demographic for this study comprised women, particularly those with limited literacy levels. This strategic selection was driven by the recognition that women with constrained literacy options often face restricted opportunities, compelling them to operate within the informal economy. These women, due to limited educational backgrounds, often find themselves constrained to participate in the formal employment sector, and therefore, are compelled to engage in the informal economy.

It is noteworthy that women, despite facing these constraints, constitute the predominant clientele within microfinance institutions. The high representation of women within this financial ecosystem highlights their resilience and resourcefulness in navigating economic challenges, even in the absence of formal financial options. This underscores the critical role that microfinance services play in providing a financial lifeline to women who might otherwise be excluded from mainstream banking services.

1.7 Limitations of the Study

The research encountered limitations in data collection, particularly related to accessing relevant statistics and information about women. One major challenge was the lack of readily available secondary sources and comprehensive data on the specific variables being studied. To address this limitation, the research team implemented several strategies. Firstly, efforts were made to gather primary data through surveys and interviews with women participants. Additionally, to mitigate the difficulty in editing, coding, and analyzing the collected data, rigorous quality control measures were implemented throughout the data collection process. This included thorough checks for data accuracy, consistency, and completeness. Furthermore, the research team leveraged advanced technology, such as digital platforms and online

surveys, to facilitate remote data collection and minimize logistical challenges. Despite these efforts, it's important to acknowledge that the limitations in data availability may have influenced the depth and scope of the analysis, highlighting the need for caution in interpreting the findings and recognizing the potential for further research in this area.

1.8 Organization of the Study

This thesis project is organised into introduction, literature review and methodology, findings and conclusion chapters. The introduction chapter presents the context of the study, problem statement to be resolved, study objectives both general and specific, research hypotheses, importance of the study, scope and study constraints. Chapter two assesses related literature including theoretical review and outlines the conceptual framework. Chapter three gives the frameworks and approach to be applied in the study. This will include research philosophy that anchor the study, research design, procedures and techniques of data collection, operationalization of the variables, analysing the gaps existing in the empirical studies reviewed and defining the ethical considerations for the study. Chapter four presents the study findings while chapter five details summary of the study findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this part, we lay out the theoretical underpinnings of the investigation, review the relevant empirical literature on the study variables, and briefly summarize the current knowledge gaps. The section also presents and ends with a conceptual framework which shows how the study has been conceptualized.

2.2 Theoretical Review

A theoretical framework relates to the collection of interconnected concepts and theories that are linked to the study. The review relates to reasoned discussion of relevant literature from previous researched documents. This study delves into various theories that try to illuminate the effect of microfinance services on financial health of women. The study was guided by empowerment theory, gender stratification theory, finance growth theory, and information asymmetry theory. In the parts that follow, we will go further into each theory.

2.2.1 Empowerment Theory

Julian Rappaport, an activist thinker, is the one who is responsible for establishing the empowerment paradigm in 1981. On the basis of this concept, we are aware that oppression is a significant contributor to the sense of helplessness that many individuals who are underprivileged experience. According to Ackerly (1995), the empowerment theory is used in the field of social work. This theory includes intervention tactics that educate people to experience an increased feeling of agency. Empowerment theory seeks to achieve the objective of providing individuals with more social, economic, and political agency in order to offer them a greater degree of

control over their own life. One other objective of this effort is to call into question the institutions that are preventing these communities from being able to provide for their own fundamental requirements.

In the process of formulating interventions and initiating social change, the notion of empowerment provides an alternate and alternative method. According to Baron and Kenny (1986), this highlights the necessity of physical and mental health, flexibility, abilities, and the presence of innate support networks. Taking this point of view into consideration, the differences that exist in the allocation and accessibility of resources are often the root cause of social problems. Rather of depending on charitable professionals to meet their requirements, there are certain people who might benefit more from receiving aid from one another, receiving support from their community, or having their rights advocated for.

The adoption of an empowered attitude involves more than just looking for the good features of a situation (Bernard, 2015). In its most basic form, an empowerment approach focuses an emphasis on promoting health rather than finding solutions to issues, emphasizing individual strengths rather than focussing on possible hazards, and recognizing social causes rather than assigning blame. Within the scope of the present investigation, this theoretical framework sheds light on the manner in which micro-credit services contribute to the improvement of the well-being of excluded groups, with a special emphasis on women. The implementation of such a strategy is critical to the improvement of the financial health of women who are linked with microfinance institutions.

2.2.2 Finance Growth Theory

The introduction of the hypothesis by Bagehot in the year 1870 marked the beginning of a theory that investigates the complex relationship that exists between the monetary and banking systems, as well as the influence that these systems have on the economy as a whole. Bagehot's observations, which Stolbov described in 2012, provided an illustration of how the British financial market controlled the flow of money by looking for attractive investments with the same degree of accuracy as water finds its own level (Bagehot, 1873). Despite the fact that this foresight was contingent on assumptions such as perfect knowledge, a frictionless economy, and transportable resources, it anticipated that investment capital would naturally gravitate towards areas that offered the highest returns. This aligned with neoclassical demand and supply theory as well as arbitrage theory.

In spite of the fact that it has been met with opposition, Bagehot's theory, which emphasizes the central role that financial institutions play in the process of collecting and distributing resources to the most successful businesses, continues to be important in the modern day. The multiplier effects of this allocation approach are seen in the larger economy, as prosperous enterprises make a considerable contribution to the expansion of the economy as a whole. When seen through the prism of Bagehot's theory, it is possible to get the conclusion that the financial system plays a very significant part in promoting economic growth.

By applying this theory to the present research, it sheds light on the ways in which micro-insurance services and the pooling of resources contribute to the development of women, hence improving their financial well-being. By gaining an awareness of and making use of these financial systems, women are given the ability to enhance

their economic well-being, which is in line with the ideals that Bagehot stated more than a century ago.

2.2.3 The Grameen Bank Micro-credit Model

The Grameen Bank micro-credit model, pioneered by Muhammad Yunus in Bangladesh, has had a profound impact on the microfinance sector worldwide. This innovative approach to providing financial services to the poor, particularly women, emphasizes the importance of small loans without collateral, group lending, and a focus on social development. The Grameen Bank model has been widely studied and replicated in various countries, including Kenya, where numerous microfinance institutions (MFIs) have adopted similar methodologies to empower women and promote financial inclusion.

In the context of a study on microfinance services, financial literacy, and financial health of women members of selected microfinance banks in Kenya, the Grameen Bank model offers valuable insights and lessons. Firstly, the emphasis on providing microcredit to women aligns with the study's focus on understanding the impact of financial services on women's empowerment and financial well-being. By examining how women members of microfinance banks in Kenya access and utilize financial services, including microcredit, the study can shed light on the effectiveness of these services in improving women's financial literacy and overall financial health.

Secondly, the Grameen Bank model's emphasis on group lending and social cohesion provides a framework for understanding the role of peer support and community dynamics in shaping women's financial behavior and outcomes. By exploring the interactions among women borrowers within microfinance groups and their collective experiences with financial services, the study can uncover the social and relational

factors that influence financial literacy and financial decision-making among women in Kenya.

Furthermore, the Grameen Bank model's focus on social development alongside financial sustainability underscores the importance of holistic approaches to microfinance. In examining the financial health of women members of selected microfinance banks in Kenya, the study can consider not only economic indicators but also broader social and empowerment outcomes, such as women's agency, confidence, and social capital.

Overall, the Grameen Bank micro-credit model offers a relevant framework for understanding and contextualizing the dynamics of microfinance services, financial literacy, and financial health among women in Kenya. By drawing on lessons from this pioneering model, the study can contribute to the growing body of knowledge on microfinance's role in promoting gender equity, poverty alleviation, and sustainable development.

2.3 Empirical Review

Literature on the study variables is reviewed in this section. The section further identifies any gaps that arises in the studies reviewed and brings out a summary of the identified gaps.

2.3.1 Micro-Credit Services and Financial Health

Micro-financial institutions, in contrast to conventional banks, are tailored specifically to the requirements of women business owners (Idris & Agbim, 2015). Women with lower incomes who own businesses have greater access to microloans, which they may employ to improve their companies' bottom lines via growth. Women-owned businesses still have limited access to financial services despite the popularity of

microloans. This is because they lack the assets necessary to offer as security to get a loan. These low-income individuals cannot get access to credit facilities since they do not have sufficient assets to offer as collaterals (Kimanzi, 2016).

A study by Diaka and Asenge (2019) considered the influence of MFBs on the performance of women-owned enterprises in Benue State, Nigeria. The researchers particularly looked at impact of microfinance saving, loan and training services on the performance of enterprises owned by women in Benue State. Survey research design and census sampling technique were adopted and questionnaire research instrument utilized to collect data from 68 entrepreneurial proprietors of the enterprises in Makurdi metropolis, Benue State. The researchers established that microfinance loan, saving and training services have noteworthy influence on the performance of enterprises owned by women. Despite the findings, the study only focused on the performance of enterprises owned by women, but not the financial health of women as it is in this study. This presents the gap to be filled by this study on microfinance services and financial health of women members of microfinance banks in Kenya.

In a separate research project, Idris and Agbim (2015) looked at the effectiveness of micro-credit in helping to reduce poverty among businesswomen in Nasarawa State, Nigeria. In particular, the research looked at how different forms of financial aid—including microcredit, which may be used to start a business interacted with the possibility of self-employment and increased financial independence. The study relied on a survey research design and a systematic sampling approach to choose participants to complete the questionnaires. Micro-credit has a substantial impact on learning, employment, economic independence, and self-sufficiency, as shown by the study's findings. It was suggested that more people be made aware of the benefits of

micro-credit in terms of access to higher learning, independent income generation, economic independence, and professional development. Although Idris and Igbim's (2015) research focused on micro-credit and women's economic empowerment, it did not examine financial health, which is a key focus of the present study.

Micro-lending was also the topic of a research by Nkpoyen and Eteng (2012), who were based in the Yala region of Cross River State, Nigeria. Three hundred participants were polled for primary data, which was analyzed using a correlation coefficient. The study concluded that establishment of self-employment prospects, improved savings by women, and enhanced membership to cooperative societies were considerably linked to poverty reduction. Based on the findings, it was recommended that women micro-lending programmes be fortified in order to improve household income. Despite the finding, the study was inconclusive since it only focused on micro-lending, which is not the only attribute of microfinance as the only independent variable. This study thus cures the gap by expanding independent variable to include micro-lending, micro-savings, micro leasing and micro insurance to guarantee a more comprehensive finding. In addition the study will look beyond women empowerment to financial health and stability of women.

Yogendrarajah (2011) in a study domiciled in Sri Lanka investigated the role of micro credit plays on women empowerment, as amplified by self-employment, healthy nutrition and poverty alleviation in the post war period. Households receiving credits to reduce poverty, provide healthy nutrition, and encourage self-employment from micro finance institutions from Jaffna region in Sri Lanka were selected to meet the research objectives. Questionnaires were used to collect the core data needed, while reports and government papers provided the secondary data. Research shows that access to small loans may help women gain independence. It was also determined that

microcredit is an essential but insufficient component of the process of increasing economic independence for low-income women. The researcher notes that similar study as this in Sri-Lanka need to be replicated in Kenya, but further expand the dependent variable to include financial health of women in Kenya. This is what the current study intends to do in order to ascertain whether similar result will be arrived at in Kenya. Moreover, other microfinance services that were not included by Yogendrarajah such as micro-insurance and micro-savings were incorporated into the analysis as well as whether financial literacy moderates the relationship between micro-finance services and financial health of women.

Siakwah (2010) studied microcredit as a means of youth and women empowerment and poverty reduction in Ghana. The researcher employed credit investment model to demonstrate how the poverty cycle of the credit beneficiaries could be transformed using microcredit facilities. The analysis of data showed mixed results, where some beneficiaries experienced great success, others reported partial success, while others failed to improve their lives with the credit advanced to them. In spite of the finding, it is observed that Siakwah only applied qualitative techniques through empirical literature review, which creates methodological limitation, particularly inability to test reliability of data used. To cure the methodological limitation, the current study utilized both quantitative and qualitative techniques.

2.3.2 Micro-savings Services and Financial Health

Customers with little financial resources benefit greatly from the microfinance industry's weekly and monthly savings groups, the funds from which may be used to provide loans to other clients (Kisaka & Mwewa, 2014). Most low-income persons would rather save money than borrow money, which may be used to meet their financial obligations. Loan amounts are often set by financial institutions based on the

borrower's saving history and current savings rate. Most financial institutions determine loan eligibility by considering a borrower's savings, as highlighted by Abiola in 2016. In the event that you require a loan, possessing a substantial emergency fund enhances your appeal as a borrower. Your savings can be utilized as collateral when seeking a loan.

Chikalipah (2018) conducted a study to see whether micro savings motivate MFIs' financial success in SSA. This research used empirical methods to examine whether or not MFIs in SSA may benefit from increasing their micro-savings rates. The research used an empirical approach, using a data collection from Microfinance Information eXchange (MIX) that included information from 350 MFIs operating in 36 Sub-Saharan countries between 1998 and 2012. The research indicated a negative correlation between microsavings and the financial results of MFIs in SSA. The increased operational expenditures associated with mobilization and management costs eat away at business profitability, which was the reason given.

In contrast to Chikalipah's (2018) research, which looked at how microsavings influence MFIs' financial performance, this study will examine how microsavings improve Kenyan women's financial well-being. Micro loans, micro insurance, and micro savings will all be analyzed together to see how they affect women's financial well-being. In addition, this research would use primary data collected from registered female consumers of MFIs in Kenya, whilst the secondary data set was collected only from the MIX market, an online data storehouse of MFIs.

Impacts of microsavings, microcredit, and training on the growth of small and medium-sized enterprises (SMEs) in Kenya's Machakos County were studied by Kisaka and Mwewa (2014). One hundred enterprises, representing eight distinct company types in Machakos County, were surveyed using a survey research approach

and a standardized questionnaire. Using a multiple regression analysis, the researcher looked at the links between micro-savings, micro-credit, and training and the expansion of small and medium-sized enterprises (SMEs), and discovered that all three positively contribute to SMEs' overall development. It was determined, however, that training had a little impact on SME expansion since it is not directly related to the demands of SMEs. The present research will employ microsavings, microinsurance, and microcredit, while financial literacy will be used as an explanatory variable and a moderating variable. Whereas previous studies have used the expansion of small and medium-sized enterprises as their dependent variable, this one will analyze the monetary well-being of Kenyan women.

Abiola (2016) studied mobilization for micro savings innovations and decrease in poverty level in Nigeria, targeting the underprivileged and self-employed individuals. The study employed primary data collected using structured questionnaire, and hypothesis tested using ordinary least squares. The generated results indicated that the savings rate by the low-income people grew by 160% and has already contributed to alleviation of extreme poverty, as a result of the emergence of enterprises. While focus of the study was on innovative savings products in the Nigerian banking industry, the current study will focus on MFIs regulated by CBK. The dependent variable was welfare and business enterprise development while the current study will focus on financial health of women in Kenya.

A study by Hulme, Moore and Barriento (2009) sought to assess the insurance role of micro-savings. Analysis findings showed that micro-savings helps to ease consumption and facilitate undertake investment. Through review of existing literature, the study findings demonstrated the role of micro-savings in attaining various insurance needs even as they remain neglected element of micro financial

services. Based on the findings, it is recommended both government and individuals to give emphasis on the adoption of micro savings owing to its potential to eliminate economic insecurity faced by the low class.

2.3.3 Micro-insurance Services and Financial Health

In its most basic form, micro-insurance is not unique. According to Richard (2011), a number of the organizations that came before insurance were involved in risk pooling and risk transfer. One of these organizations was the Roman funeral guilds. Industrial life insurance and mutual assistance societies are examples of products that have been available since the late 19th century and the early 20th century, therefore it would be accurate to say that they are not exactly cutting edge. A number of credit unions and cooperatives, some of which went on to establish their very own insurance companies, were instrumental in laying the groundwork for the procedures involved in microinsurance. In the beginning, the scope of micro-insurance was restricted to credit life products that paid off the remaining amount of the loan upon the borrower's passing. In the credit life market, insurers and specialized intermediaries swiftly dropped their costs in order to compete for clients for their services. As a result of the decrease in premiums to price-sensitive levels, service providers developed new types of protection for their customers (Gerrit, 2014). In 2015, Nzembela and Mazambani conducted research to explore the contribution of microinsurance to the protection of the poor. Regarding this matter, the researchers conducted an analysis of the characteristics that influence the adoption of microinsurance among individuals with low incomes in South Africa. The demographic of South African Advertising Research Foundation (SAARF) members was the focus of the research study. The findings of the research reveal that the most important aspects are the following: the location of the market, the absence of

information on insurance, and the existence of other methods for dealing with risk. On the other hand, the present research will make use of microinsurance as an explanatory variable and will attempt to ascertain the impact that it has on the financial well-being of its female participants. In a similar vein, the demographic that was targeted was comprised of adult South Africans who were members of SAARF, while the present research will focus on registered female consumers of MFIs across Kenya.

An investigation of the effects of micro-impact insurance on Kenya's insurance sector was carried out by Alando (2014). With the use of an analytical survey and a correlation analysis, the researcher was able to determine the nature of the link that exists between the variables. The population of the research consisted of ten businesses that had been chosen because they provide insurance to small businesses in the healthcare and real estate industries. Information on net profits may be obtained from a variety of secondary sources, including annual reports from the insurance sector and financial statements from insurers specifically. In order to gather primary data on claims, premiums, and insurance cover costs from 2009 to 2013, the research made use of the data forms that were subsequently sent to the heads of the guaranteeing and financial departments. A regression model was used to demonstrate that micro-insurance claims, micro-insurance premiums, and micro-insurance expenses are key variables in the financial results of insurance companies. The findings of the study were decided by the statistical analysis. In this study, micro-insurance, micro-credit, and micro-savings were employed as explanatory factors. In contrast, the three independent variables that were investigated in the first research were micro-insurance claims, micro-insurance premiums, and micro-re-insurance cost. In spite of the fact that earlier studies investigated the financial performance of

microfinance institutions (MFIs) in Kenya that underwrite micro-medical and property businesses, the emphasis of this analysis will be on the well-being of women who have legally registered with MFIs.

A study conducted by Lee and Solana (2013) investigated effective methods for increasing microinsurance. Customer reluctance to purchase insurance stems from a number of factors, including customers' mistrust of insurance companies, customers' lack of financial and insurance literacy, customers' uncertainty about the worth of future benefits, and the high cost of premiums, according to the authors. Micro insurance providers continue to struggle with inspiring and maintaining demand for their products because of these factors. For the purpose of promotional planning, it was recommended that micro-insurance providers and distribution partners adhere to a step-by-step model. This model included providing context, outlining the current offer, establishing objectives that were specific, measurable, attainable, relevant, and timely (SMART), and determining the intended recipient base. However, the research conducted by Lee et al. (2013) did not investigate the impact that micro-insurance has on the financial health of women, despite the fact that it does provide effective methods for promoting micro-insurance.

Li, Moshirian, Nguyen, and Wee (2007) conducted research on micro-life insurance in countries that are members of the OECD. The findings of the study, which are consistent with those of other studies, demonstrated that there is a positive income elasticity of demand for life micro-insurance. The researchers discovered that the demand increased with the number of people living in a home and the degree of education of those people, but it decreased with the cost of social security and the length of time people lived. The degree of financial development in a nation and the vitality of its microinsurance market were shown to have a favorable effect on the

sales of life micro-insurance. On the other hand, real interest rates and high inflation tended to have a negative impact on consumption. In conclusion, there was a rise in the revenue of those insurers, which led to an improvement in the demand for life micro-insurance. In contrast to the present research, which investigated the impact that micro-insurance has on a person's financial health, Li et al. (2007) concentrated on the variables that influence the demand for micro-insurance.

2.3.4 Financial Literacy and Financial Health

One can only have any prospect of achieving a position of financial security via the pursuit of education. According to Son and Park (2019), if you want to attain both short-term and long-term goals, you need to ensure that you begin saving money at an early age and continue doing so on a consistent basis. When you are aware of the distinction between good debt and bad debt, it will be easier for you to avoid using costly credit cards. One of the most important things you can do for your entire health is to have that financial stability. The ability to maintain a dynamic relationship between one's financial and economic resources and the manner in which those resources are used or the ways in which they influence one's physical, mental, and social health is what it means to be financially healthy.

The conclusions that may be drawn from Klapper and Lusardi's (2020) study on the relationship between financial literacy and resilience are rather intriguing. The variable of financial literacy was evaluated by means of a series of questions that were posed to the local population on their knowledge of various financial subjects, such as inflation, credit interest rates, and risk diversification. According to the findings of the survey, one third of people lacked even a fundamental understanding of the concepts underlying finance. Based on the findings of the research, it was found that those with higher levels of education who are already customers of financial services and those

who are affluent within the society are more aware and informed about the investigated financial concepts. Additionally, the research discovered that loan products, the vast majority of which are associated with high interest rates, are becoming more freely accessible. This makes consumer dangers even more severe, particularly when considering the low level of financial literacy.

The authors Sanistasya, Raharj, and Iqbal (2019) conducted research to investigate the influence that financial education and involvement have on the environment of small businesses in East Kalimantan. In order to collect data from each of East Kalimantan's one hundred small enterprises, this study used a non-probability census sampling approach. Additionally, an explanatory research design was utilized throughout the procedure. Using the Partial Least Square method to analyze the data that was acquired, the researchers came to the conclusion that a strong connection existed between financial literacy and better company performance. In a similar vein, it was discovered that financial inclusion had a favorable impact on the performance of SMEs. In the previous research, the two factors that were utilized to explain the phenomenon were financial literacy and financial inclusion. However, in the present investigation, the variable that will be used to moderate the relationship is financial literacy.

An investigation of the ways in which financial education influences financially responsible conduct was carried out by Son and Park (2019) as part of a study that aimed to investigate the mediation effects of financial literacy. Three different forms of mediation analysis were used in the research project to determine whether or not individuals from Korea who came from a variety of socioeconomic backgrounds had a perception of the mediating connection. Based on the findings of the research, it seems that persons with mid- to high-incomes might potentially benefit from

receiving financial education. When lawmakers are speaking with people who have low incomes, it was advised that they take into consideration the need of financial literacy in order to help these individuals better their own financial conditions. In contrast to the previous study, which accepted financial literacy as a mediating variable between personal finance and financial education, this study used financial literacy as a moderating variable.

Wafula (2017) conducted research to determine the extent to which small-scale farmers in Trans Nzoia County are financially included and how the amount of financial literacy affects this level of participation. Using a descriptive approach was the research technique that was used. The majority of the sample consisted of three hundred eighty farmers from the county of Trans Nzoia. Questionnaires were used to gather primary data, which was then analyzed using both inferential and descriptive statistical methods thereafter. It was necessary to draw the conclusion that the degree of financial literacy of small-scale farmers in terms of debt management, savings, financial planning, and investment activities was a significant factor in determining their access to and use of financial services provided by financial institutions. A favorable association between increasing financial inclusion and higher financial literacy was shown to exist, according to the research. Despite the conclusion, Wafula concentrated on financial inclusion as the dependent variable, with the scope of the research being Trans Nzoia County. However, the study does not seek to investigate financial health, which is the subject of this investigation. In addition, the researcher focused on small-scale farmers, while the focus of this study is on women who are members of MFBs in Kenya.

Within the context of a separate research conducted in Nairobi, Kenya, Hinga (2014) investigated the relationship between financial literacy and individual savings habits

among workers of the Postal Corporation of Kenya. Using a descriptive survey research methodology and analysis that made use of descriptive statistics, the study came to the conclusion that individual savings were significantly influenced by both financial literacy and financial literacy. This resulted in the proposal that the government implement rules that would guarantee staff financial literacy trainings are carried out. These policies should specifically target individual savings, such as savings accounts at Sacco and banks, pension plans, insurance plans, and general personal finance. However, the research conducted by Hinga (2014) did not indicate how financial literacy affects one's financial health. The study did, however, give evidence of the connection between financial literacy and individual savings.

Through the use of financial education and awareness, Hung, Yoong, and Brown (2012) investigated the process of women gaining financial independence. Using a qualitative research approach, the study examined data pertaining to women and their level of financial literacy. When data from academic literature and the Financial Literacy Survey from 12 member nations of the OECD were taken into consideration, it was discovered that there was a gender disparity in financial literacy in a number of different countries worldwide. Furthermore, the research made the observation that there was a dearth of information about the availability of financial education for women. While the previous study was an empirical assessment of previous research on women's financial empowerment via financial literacy, the present study would employ primary data to investigate whether or not financial literacy moderates the association between microfinance services and the inclusion of women in the financial system. In this particular context, the research concentrated on women who were registered with microfinance institutions (MFIs) in Kenya, as opposed to employing academic literature for OECD fiscal literacy surveys.

2.4 Summary of Empirical Literature and Research Gaps

The table below gives a summary of the empirical literature, the key findings, research gaps and the main focus on this study.

Table 2.1. Summary of Literature and Research Gaps

Author(s)	Research Title	Key findings	Research gap(s)	Focus of current study
Son and Park (2019)	In what way financial education influences personal finance among different groups in Korea	Financial education mediates stable personal finance in the middle and high income classes	Financial literacy was adopted to mediate financial education and sound personal finance	This study used financial literacy as a moderating factor between microfinance services and financial health of women in Kenya
Sanistasya, Raharj and Iqbal (2019)	Influence of financial literacy and inclusion on the performance of small businesses in Kalimantan	The outcomes depicted that financial literacy had positive significant influence on enterprises performance. Similarly, financial inclusion was found to positively affect SME performance.	Financial literacy and financial inclusion were the two explanatory variables used in the study	Financial literacy was adopted as a moderating variable.
Diaka and Asenge(2019)	The influence of MFBs on the performance of nominated women-owned enterprises in Benue State, Nigeria	Established that microfinance loan, saving and training services have noteworthy influence on the productivity of business enterprises belonging to women.	The study only focused on the productivity of business enterprises belonging to women, but not the financial health of women as it is in this study.	The current study examined how microfinance services affect financial health of women in Kenya.
Chikalipah (2018)	To find out whether micro	The findings showed an	The study only focused on how	The joint effect of

	savings inspire financial performance of MFIs in SSA	existence of a statistically noteworthy negative connection between micro savings and the financial performance of MFIs in SSA.	microsavings stimulate financial performance of MFIs. Secondary data set was solely obtained from an online bank of MFIs known as the MIX	micro loans and micro insurance alongside microsavings on the financial health of women is examined. Primary data sourced from registered women clients of MFIs in Kenya were utilised
Abiola (2016)	The mobilization for micro savings innovations and decrease in poverty level in Nigeria, targeting the underprivileged and self-employed individuals.	Microsavings has helped alleviate extreme poverty	The study was confined to innovative savings in the Nigerian banks The dependent variable was welfare and business enterprise development	The current study will focus on MFIs regulated by CBK. This study adopted financial health of women in Kenya.
Idris and Agbim (2015)	How micro-credit can be employed as a strategy to alleviate poverty amongst women in business in Nasarawa State	Micro-credit plays noteworthy control on education, self-employment, economic empowerment and training and skills acquisition.	Focused on the connection between micro-credit on education, self-employment, economic empowerment and training and skills acquisition. Moderating effect of financial literacy not examined.	This study investigated the association between micro-credit and financial health. Moderating effect of financial literacy on this relationship was tested.
Nzembela and Mazambani	role of micro-insurance in	The study indicate that the essential	Only factors limiting micro-	This study used micro

(2015)	protecting the poor	<p>factors that limit microfinance are; remoteness of the market, lack of insurance information and the presence of substitute risk-coping approaches.</p> <p>Microfinance also focuses on women since they are considered to have greater impact on development of the society.</p>	<p>insurance uptake amongst low-income groups were examined.</p> <p>Target population was adult South Africans within SAARF</p>	<p>insurance as an explanatory variable and sought to determine its influence on financial health of women.</p> <p>This study targeted registered female clients of MFIs in Kenya.</p>
Lee and Solana (2013)	Good practices in promoting microinsurance	<p>Good practices include providing background information, describing the current offer, establishing SMART goals for this promotional effort and selecting and describing the target audience</p>	<p>Failed to demonstrate the effect of microinsurance on financial health as focus was only on good practices in promotion of microinsurance</p>	<p>This study examined how micro-insurance alongside micro-credit and microsavings affect financial health of women.</p>
Nkpoyen and Eteng (2012)	Focused on micro-lending as a strategy to empower women and alleviate poverty	<p>Establishment of self-employment prospects, improved savings by women, and enhanced membership to cooperative societies were considerably linked to poverty reduction.</p>	<p>The study was inconclusive since it only focused on micro-lending, which is not the only attribute of microfinance as the only independent variable.</p>	<p>This study also examined the relationship between micro-savings, micro-insurance and financial health of women.</p> <p>This study was limited to the urban setting of Nairobi City County as opposed to local</p>

				Government Area.
Oware (2012)	The effect of microfinance loans on poverty reduction.	Microfinance loans contribute meaningfully to poverty reduction in Kenya	This was a case study of K-Rep bank. Only descriptive statistics employed in analysis	This study surveyed all MFIs regulated by CBK and focus was on women clients registered with the institutions.
Hung, Yoong, and Brown(2012)	Women financial empowerment through financial awareness and education	There is gender differences in financial literacy. There is more limited and relatively sparse information on financial education programmes of women with proven efficacy	this was only an empirical review of studies on women financial empowerment through financial literacy. The used academic literature for OECD financial literacy surveys.	This study used primary data to examine whether financial literacy moderates the connection between microfinance services and financial health of women.
Hulme, Moore and Barriento(2009).	The insurance role of microsavings.	Microsavings play a significant role in attaining various insurance needs	Insurance was adopted as the dependent variable and not financial health	Along with micro-credit and micro-insurance, this study explored the influences micro-savings exert on financial health of women.

Source: Author (2022)

2.5 Conceptual Framework

A conceptual framework serves as a theoretical structure that guides the development of a study by outlining key concepts, variables, and relationships relevant to the research topic. It provides a systematic framework for understanding and analyzing

phenomena within a specific field of study, helping researchers to conceptualize their study's scope, objectives, and theoretical underpinnings. Figure 2.1 presents the conceptual framework adopted for this study, which is derived from both theoretical and empirical reviews carried out. The framework covers financial health and microfinance services with the intervention of financial literacy. Financial health is the dependent variable. Microfinance services which form the independent variable are micro-credit, microsavings and micro-insurance. Financial literacy is also conceptualized to moderate the connection between microfinance services and financial health. The relationship is shown in figure 2.1.

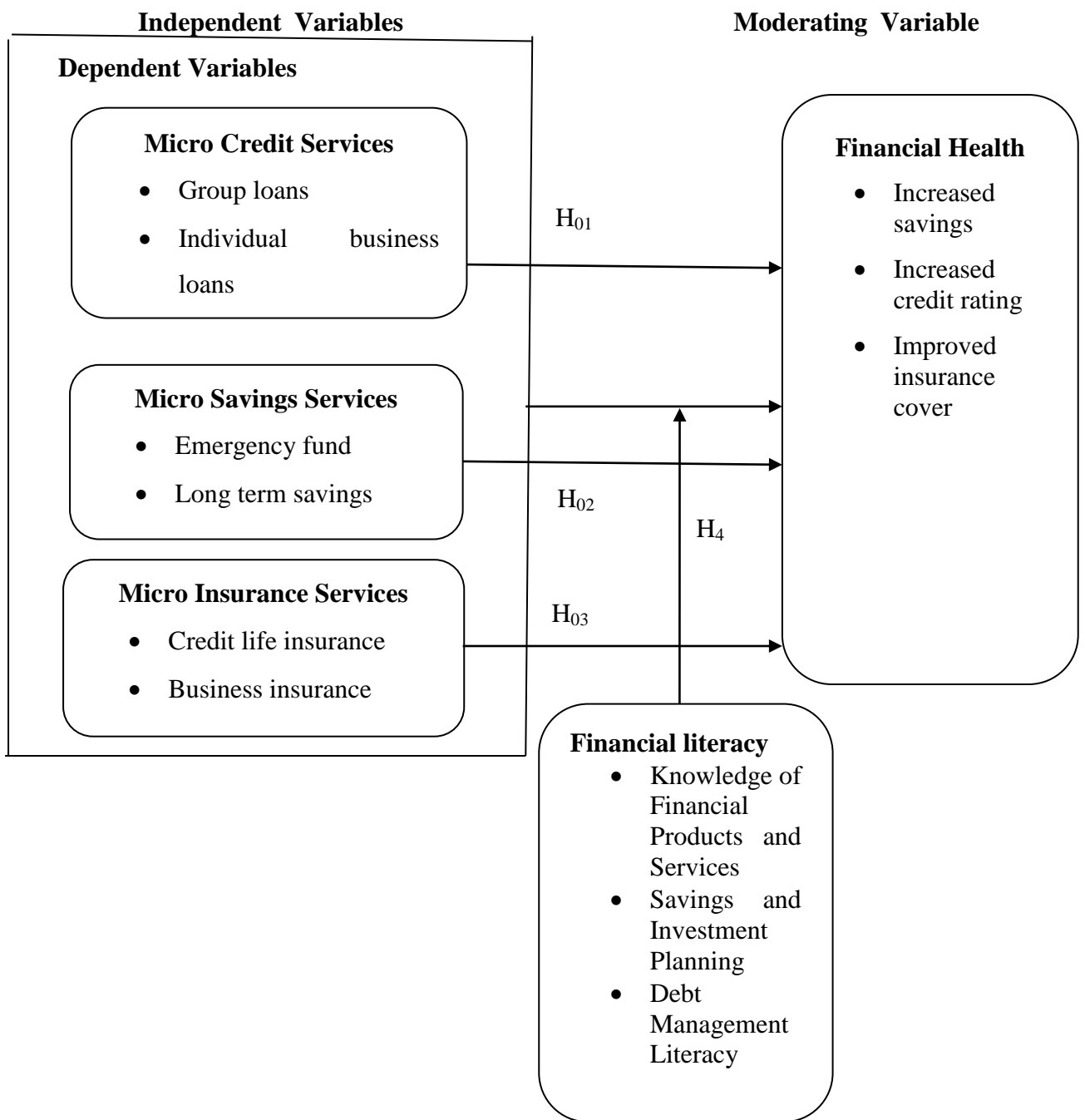


Figure 2.1. Conceptual Framework

Source (Researcher, 2024)

- H₀₁:** Micro-credit services have no effect on financial health of women members of selected microfinance banks in Kenya
- H₀₂:** Micro-savings services have no effect on financial health of women members of selected microfinance banks in Kenya
- H₀₃:** Micro-insurance services have no effect on financial health of women members of selected microfinance banks in Kenya
- H₀₄:** Financial literacy does not moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section undertakes a methodical presentation of the study plans that was adopted to assess the influence of microfinance services on financial health of women members of MBFs in Kenya. The section covers the study methodology which was done under the research design which the study adopted, the target population, sampling procedure and sample size, adopted research instruments for data collection, validity and reliability, data analysis procedures and the ethical considerations.

3.2 Research Philosophy

According to Krauss, (2005), research philosophy generally refers to the specific strategy employed to generate information on a certain topic and guides assumptions development about the world through the lens of a researcher. There are two main philosophies that are widely adopted in research: Positivism and phenomenological (interpretivism). Positivism is characterized by statistical analysis of observations and testing of hypothesis based on constructs obtained from existing theories while interpretivism philosophy is concerned with scenarios where findings are not derived from statistical analysis but subjectively premised. To attain objectivism, this study therefore adopted positivism philosophy to explore a true reality regarding financial health and use of microfinance services among women in Kenya as this cannot be changed by social actors.

Positivism philosophy asserts that objective reality does not require human interpretation, and that gaining a better understanding of it may be accomplished by

acquiring more thorough and full data (Given, 2008). Because these events are based on observable facts, their interpretation is objective. With regard to this study, microfinance services and financial health were considered real occurrences whose interpretation can only be objective. The fact that these two variables had a positive, negative, or no relationship is an objective and repeatable fact that can be traced back to the data and the analysis used to establish the link. On the same note, obtaining extensive information about the variables provided greater insights into the relationship between them.

3.3 Research Design

According to Creswell and Creswell (2017), a research design regards a wide-ranging plan of collecting essential data for the accomplishment of research objectives. The study used an explanatory research strategy, which included collecting quantitative data to ascertain the impact of independent factors on the dependent variable. According to Saunders, Lewis, and Thornhill (2009), the main focus of explanatory research is to examine a scenario in order to clarify the relationships between variables, which is an advantage over descriptive research. Because it allows for the cost-effective collection of massive amounts of data from a large population, that's why.

3.4 Target Population

The study largely focused on assessing the effect of microfinance services on financial health of women members of microfinance banks in Kenya. The population of interest for this study comprised of women members of microfinance banks in Kenya. According to AMFI (2021) there are 37,773 women members of microfinance banks clients who currently hold active deposit accounts

and active loan accounts in the 14 microfinance banks in Kenya. The 14 microfinance banks are the licensed MFBs by CBK as at December 31, 2022 (appendix (III)). The cumulative data on number of women members of the MFBs was sourced from the microfinance banks headquarters without divulging personal identifying details of the clients in order to safeguard on confidentiality.

3.5 Sampling Design and Sample Size

Sampling techniques and sample size are key, to guarantee adequate representation of the population for accurate inference (Kombo & Tromp, 2006). Mugenda and Mugenda (2003) while focusing on research methods noted that a sample size of 10% to 30% is a good representation. Based on this, the researcher intended to sample women members of MFBs from 3 (10-30% of the target population) out of 14 microfinance banks operating in Kenya, making 21.4% of the population of MFBs licenced by CBK as at 2020. The researcher adopted a combination of purposive and stratified sampling techniques to select women members of microfinance banks. Purposive sampling was applied to pick all the 3 microfinance banks categorised by CBK as large MFBs, which control 81% of the market share of with a total population of 37,773 women members in Kenya, while stratified sampling was used to pick women members of MFBs from the three strata, which were; Kenya Women MFB, Faulu MFB and Rafiki MFB. The basis for selecting the three microfinance banks out of the 14 operating in Kenya was primarily their market share. The three selected banks were categorized by the Central Bank of Kenya (CBK) as large microfinance banks and collectively controlled 81% of the market share. This means that these banks had a significant presence and influence within the microfinance sector in Kenya. Additionally, it's important to note that the selection criteria were not solely based on being the first to be licensed by the CBK. Instead,

the focus was on the market share they commanded, which indicates their prominence and relevance within the industry. By targeting these large microfinance banks, the researcher aimed to ensure adequate representation of women members from institutions that have a significant impact on the microfinance sector in Kenya. Therefore, the selection of these three banks was strategic, aiming to capture a substantial portion of the target population while ensuring diversity across different strata within the microfinance sector. This approach allowed the researcher to obtain a representative sample that could provide valuable insights into the experiences and perspectives of women members across different types of microfinance institutions in Kenya.

To arrive at the sample size of respondents, the study used Fischer (1983) formula because the target population is large, calculating at 95% confidence level with degree of precision p at 0.05. The formula used to calculate a sample size is presented as follows;

$$n = Z^2 * p * (1-p) / d^2$$

Where:

n = Sample size

Z = Normal distribution Z value score, (1.96)

p = Fraction of units in the sample size possessing the variables under study, where for this study it is set at 50% (0.5)

d = Preferred accuracy level or the significance level which in this case is 5%

Using Fisher's formula, the sample size was thus computed as follows.

$$n = 1.962 * 0.5 * 0.5 / 0.05^2$$

$$n = 0.9604 / 0.0025$$

n= 384

The study targeted a total of 384 respondents. The sample size was proportionately drawn from the three strata as represented in table 3.3. The women respondents were identified randomly from the walk-in clients and issued with the questionnaires.

Table 3.1. Sample Distribution

Strata (n₁, n₂ & n₃)	Population	Percentage	Sample Size
Kenya Women MFB	30,554	80.9%	311
Faulu MFB	6,983	18.5%	71
Rafiki MFB	236	0.6%	2
Total	37,773	100	384

Source: AMFI 2021

3.6 Empirical Model

Descriptive statistics were employed to analyse the data in order to establish the impacts of microfinance services on financial health of women members of MFBs in Kenya. The researcher closely observed the mean deviation, the standard deviation of the data, and percentage scores through the help of SPSS. Correlation analysis equally was conducted in order to determine the connection between the study variables. The behaviour of the research variables were established through the multiple regression model. The multiple regression model was preferred because of its relevance to measure the strength of relationship, between the mean value of financial health of women members of microfinance banks denoted as (Y), and the microfinance services variables denoted the equation as X1 X2 and X3.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \dots \dots \dots i$$

Where;

β_0 = Constant (intercept)

β_1, β_2 and β_3 = Beta coefficients of independent variable

Y = Financial health

X_1 = Micro-credit services

X_2 = Micro-savings services

X_3 = Micro insurance services

ε = Error term

3.6.1 Testing for Moderation

Testing for moderation involves a process of establishing whether the coefficient for the interaction variable is statistically significant. In this study, moderation was tested by identifying if there exists noteworthy relationship between the moderating variable (financial literacy) and X_1, X_2 and X_3 and dependent variable. Models that have previously been used to test moderation include; Baron and Kenny Model, which is a 4-step method, in which steps 1 and 2 use basic linear regression, while steps 3 and 4 use multiple regression (Baron & Kenny 1986); and the mediation package method by Preacher and Hayes (2004), which computes the point estimate over a large number of random sample. In this study the researcher adopted the model by Baron and Kenny that used linear and multiple regressions. To establish the moderation effect of financial literacy on the connection between microfinance services and financial health the following step-wise regression models were estimated;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \dots \dots \dots \text{ii}$$

$$Y = \beta_0 + \beta_1 X_1 M + \beta_2 X_2 M + \beta_3 X_3 M + \varepsilon \dots \dots \dots \text{iii}$$

$$Y = \beta_0 + \beta_4 MFS + \beta_5 MFS * FL + \varepsilon \dots \dots \dots \text{iv}$$

Where;

Y= Firm performance

β_0 = Constant (intercept)

β_4 and β_5 = Beta coefficients

MFS = Composite Index for Microfinance Services of microcredit, micro savings and micro insurance.

FL = Composite Index for Financial Literacy

ε = Error term

Model (iv) was used to give the direction and effect of the financial literacy on financial health and the total effect of the moderator on financial health through the interaction between financial literacy and financial health. In this case, financial literacy was considered to have moderation effect of the p value is statistically significant at $p \leq 0.05$

3.7 Operationalization and Measurement of Variables

The table 3.2 outlined the way variables were operationalized and evaluated.

Table 3.2. Operationalization and Measurement of Variables

Variable	Category	Operationalization	Measurement
Financial Health	Dependent Variable	<ul style="list-style-type: none"> • Aptitude to manage daily finances • Capacity to cope with risks • Capability to invest in livelihoods and future 	<ul style="list-style-type: none"> • Ordinal Measurement • Interval Measurement • Nominal Measurement
Micro-credit	Independent Variable	<ul style="list-style-type: none"> • Loans for new businesses • Loans for expansion of existing businesses • Loans for skills development • Loan a and affordability 	<ul style="list-style-type: none"> • Ordinal Measurement • Interval Measurement • Nominal Measurement
Micro-savings	Independent Variable	<ul style="list-style-type: none"> • Small savings for education, • Health promotion savings • Future consumption savings 	<ul style="list-style-type: none"> • Ordinal Measurement • Interval Measurement • Nominal Measurement
Micro-insurance	Independent Variable	<ul style="list-style-type: none"> • Life insurance and retirement plans, • Health insurance • Property insurance 	<ul style="list-style-type: none"> • Ordinal Measurement • Interval Measurement • Nominal Measurement
Financial Literacy	Moderating Variable	<ul style="list-style-type: none"> • Debt/loan management skills • savings management • Insurance skills. 	<ul style="list-style-type: none"> • Ordinal Measurement • Interval Measurement • Nominal Measurement

Source: Research Data (2024).

3.8 Data Collection Instrument

This study obtained primary data from the sampled respondents using a structured questionnaire for ease of analysis as shown in Appendix II. Questionnaires have many advantages: they easily cover extensive geographical coverage to collect reliable data at minimal cost, are free from interviewer bias, the interviewees have

sufficient time to respond accurately, and are ideal for collecting data from unfriendly and unapproachable respondents (Kothari 2004). The questionnaire was divided into various sections where section A consisted of demographic data of the respondents and sections B up to F designed to measure each study variable.

3.9 Data Collection Procedure

The study used primary data to establish the effect microfinance services and financial health of women members of microfinance banks in Kenya. Primary data was collected using structured questionnaires from women members of microfinance banks in Kenya, from the three sampled firms. The researcher first booked appointments with the MFBs branch managers sought permission and facilitated smooth administration of the questionnaires. The researcher identified the women members by first contacting the managers of the microfinance. The manager offered the names of the women members and their contacts. The researcher then contacted the women members for the process of data collection. Part for the questionnaires were administered directly by the researcher to walk-in customers of the MFBs, while others were administered through the drop and pick technique, to give respondents adequate time to familiarise themselves and complete the questionnaire. The drop and pick questionnaires were left at the customer service desk of each of the MFB branches for ease of accessibility by the clients who walk in for service.

3.9.1 Pilot Test

Pre-study is meant to test the clarity of the questions to the respondents and to ensure that there is no ambiguity in any of the questions. The test thus helps the researcher to polish the questionnaire, improve the quality such that each question elicits similar

understanding (Cooper & Schindler, 2014). Pre-test also acts as a rehearsal to the real collection, for the researcher to evaluate how long the respondents took to complete filling the questionnaire, in order to approximate adequate timelines needed to complete the actual data collection. There was need to pre-test the research instruments before the main data collection process as recommended by Cooper and Schindler (2014). According to Creswell (2003), adequate pilot study should constitute between 5% and 10% of the total. For this study, a pilot test consisted of 23 randomly selected respondents from microfinance banks in Nairobi City County. The 23 questionnaires represented 5.8% of the sample. This threshold is between 5% and 10% of the total sample to be constituted (Cooper & Schindler, 2014). These respondents were omitted from the main study.

3.9.2 Validity of the Research Instrument

This study adopted content, criterion-related and construct validity to measure the validity of the questionnaire (Drost, 2011). Content validity refers to the level which the questionnaire offers satisfactory coverage of study area questions covering all the variables of study and the entire domain the test seeks to measure (Saunders, *et al*, 2009). Criterion-related validity on the other hand relates to the ability of the questions to elicit accurate responses during actual data collection (Saunders, *et al*, 2009). This nature of validity shows the accuracy of the measures to meeting the test of relevance, free from bias and reliability (Kothari, 2004).

Construct validity focuses on the extent to which the questionnaire questions accurately measure the constructs the study envisioned to measure (Kothari, 2004). Theoretical relationships in the construct validity was specified in the first step followed by empirical connections between the measures of the concepts scrutinized in step two.

3.9.3 Reliability of the Research Instrument

Both the test-retest reliability technique and the Cronbach's Alpha coefficient are frequently used to assess the consistency of a measurement instrument's results. Evidence of random error, which causes results to deviate from a true measurement, is a strong indicator of the reliability of a study instrument. The questionnaire to be used in this study was considered reliable if the data collected generates similar results in repeated application (Kumar, et al 2013). Further, reliability of the research instrument was evaluated through the test scores, particularly when the measurement errors are omitted (Kombo & Tromp, 2006).

In this study, reliability was enhanced by including diversified questions targeting similar measure, by interviewing different category of individuals and by adopting uniform testing procedures to check of the consistency. This was done during pilot test, where Cronbach's alpha was employed at 0.7 consistency value considered as a benchmark rate (Taherdoost, 2016).

3.10 Data Analysis and Presentation

The data collected was summarized into themes as outlined in the questionnaire, entered into the SPSS for quantitative analysis. Quantitative data was obtained using close-ended questions in the questionnaire, and SPSS software version 21.0 was employed to generate descriptive statistics like mean, percentages, frequency distributions, and standard deviations. Data analysis results were presented in parameter estimate tables, correlation analysis tables, descriptive statistics tables and graphs and charts. The influence of microfinance services on financial health of women members of MFBs was established through running regression and correlation analysis model.

The research hypotheses were subjected to testing at a confidence level of 95% to determine the significance of the impact of microfinance services on the dependent variable. The process of hypothesis testing, utilizing p-values, served as a critical component in the decision-making process regarding the null hypothesis. Specifically, if the calculated p-value was less than 5%, it led to the rejection of the null hypothesis, thereby endorsing the alternative hypothesis. This methodological approach adheres to scholarly standards and statistical rigor in evaluating the effect of microfinance services on the dependent variable.

3.11 Diagnostic Tests

The association amid the study variables need to justify the deductions of multiple regressions. Diagnostic tests in this study need be one to test for agreement with the classical linear regression assumptions (Zeng, 2019). Diagnostic tests need to be undertaken before data analysis in order to guarantee validity of the outcomes of regression analysis. The diagnostic tests comprised test of normality, multicollinearity, linearity and homoscedasticity (Deeks& Altman, 2004). Diagnostic tests play a pivotal role in a study as they serve the fundamental purpose of assessing the validity, reliability, and overall robustness of the research methodology and statistical models employed. These tests are indispensable tools that enable researchers to identify potential issues, outliers, or anomalies within the data, ensuring the integrity of the study's findings.

3.11.1 Normality Test

The test of normality is meant to determine whether the data collected from the variables are normally distributed. The test of normality informs the statistical inferences taken by the researcher about the sample (Das &Imon, 2016). According to

Wooldridge (2000), if the condition of normality is met, there will be no skewness on the plotted histogram, while violation of normality assumptions will result into a less reliable regression coefficient. To test for normality, the researcher used the Shapiro-Wilk test. Below are the null hypotheses as well as the alternative hypotheses.

H0: the data was not normal.

H1 the data is normal

A p-value more than 0.05,
would lead to rejecting the null hypothesis and vice versa.

3.11.2 Test for linearity

Multiple regressions assume a linear link between the reliant and the causative independent variables. In this study, scatter plots were used to confirm linearity of variables as recommended by Field (2000). According to Uyanık and Güler (2013), the plotted data need to cluster around a straight for it linear relationship to exist. If Non-linear, log transformations was done.

3.11.3 Test for Multicollinearity

Multicollinearity ensues when causative variables considered in the model are extremely correlated (Garson, 2012). The test involved computing Variance Inflation Factor (VIF) in which a threshold of $VIF \leq 10$ was considered to mean there is no problem of multicollinearity. The presence of Multicollinearity indicates that statistical extrapolations arrived at may not be dependable (Field, 2009). This problem was cured by aligning the data to the centre or eliminating all together the independent variables that registered higher VIF values.

3.11.4 Test for Homoscedasticity

According to Field (2013), multiple regressions hold the assumption that the volatility of the error term is constant (Homoscedasticity). This study used Breush-Pagan test to check for homoscedasticity of variance as commended by Warner (2008). It is noted that $P > 0.05$ is recommended for the test to meet homoscedasticity assumption. The violation of homoscedasticity (heteroscedasticity) makes the coefficient of regression be less reliable. Heteroscedasticity is also addressed through log linear transformation.

3.12 Ethical Considerations

Ethical considerations are significant in research since it promotes the aims of research to expand knowledge, supports the values of mutual respect and fairness in collaboration, and safeguards the social and moral values of safety to others. In other words, ethical considerations concern scientific integrity, reliability and validity of findings, and ensures human rights and dignity as well as enhancing collaboration between science and society (Sandu, Frunza & Unguru, 2019). Essential ethical concerns were identified prior to the data collection process, to ensure all ethical concerns were addressed. Due to the COVID 19 scourge, the researcher guaranteed the commitment to adherence of all COVID 19 protocols as issued by the Ministry of Health, including proof of vaccination to respondents where needed. The researcher sought the consent of the respondents, whose participation in this study was voluntary in addition to ensuring confidentiality of all the interviewees including non-disclosure of respondent's identity. In addition, the respondents were assured that the findings of the study was exclusively for academic use. Prior to data collection, researcher further obtained permission letter from the University Graduate School and a letter from NACOSTI authorising the research and data collection. To ensure

accurate conclusions, the study findings were presented as generated without any alteration and deception.

CHAPTER FOUR

RESEARCH FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

The results of the research, based on primary data obtained from respondents' completion of semi-structured questionnaires, are detailed in this chapter. When it came time to analyze and display the data, SPSS Version 23.0 was the tool of choice. Tables, figures, percentages, means, and standard deviations comprised the presentation of the results.

4.2 Response Rate

A total of 384 questionnaires were sent to women residing in Kenya who are customers of 14 different microfinance institutions and who have either active deposit or loan accounts with these institutions. A total of 377 surveys were sent back to the researcher, yielding a 98.1% response rate. According to the inquiry, this was sufficient. Table 4.1 displays the outcomes.

Table 4.1 Response Rate

Response Rate	Frequency	Percentage
Responded	377	98.1
Not Responded	7	1.9
Total	384	100.0

Source: Research Data (2024)

4.2.1 Reliability Test Results

In order to ensure that the study instruments were reliable, the researcher conducted a pretesting. Research instruments were determined to be reliable if their Cronbach's alpha values were 0.7 or above. The outcomes may be seen in the table provided;

Table 4.2 Reliability Test Results

Variable	Cronbach's alpha
Micro Credit Services	0.769
Micro Savings Services	0.848
Micro Insurance Services	0.797
Financial Literacy	0.824
Financial Health	0.786
Average	0.805

Source: Research Data (2024)

The Cronbach Alpha values for different services are as follows: micro credit services 0.769, micro credit saving 0.848, micro insurance services 0.797, financial literacy 0.805, and financial health 0.786. The variables all had a Cronbach alpha value of 0.7 or above, with an average coefficient of 0.805, indicating the study instruments were credible for data collection. Cronbach (1950) found that a Cronbach alpha over 0.7 is considered adequate for the research.

4.2.2 Validity Test Results

The method was conducted using factor analysis. KMO and Bartlett's Test of Sphericity are often used measurements. A Kaiser-Meyer-Olkin score between 0 and 1 with an index over 0.5 indicates a significant factor. An index greater than 0.05 is not acceptable for Bartlett's test. The Kaiser-Meyer-Olkin (KMO) measure was 0.861,

indicating a value between 0.5 and 1. Hence, the index is satisfactory. The p-value of Bartlett’s test of sphericity was 0.000, indicating statistical significance at a 0.05 significance level. Hence, the research affirms the validity of the tool.

Table 4.3 KMO and Bartlett's Test

KMO and Bartlett's Test			
KMO Measure of Sampling Adequacy			0.861
Bartlett's Test of Sphericity	Approx. Chi-Square		347.989
	df		10
	Sig.		0.000

Source: Research Data (2024)

4.3 Demographic Characteristics

The research attempted to collect data on the participants' fundamental details to assess their eligibility for participation in the study. The approach was used to assess the reliability of the data collected from the participants. This research aimed to gather demographic data from participants, such as their marital status, level of education, age, source of income and monthly income.

4.3.1 Marital Status

The respondents were asked to indicate their marital status. Their responses were as shown in figure 4.1.

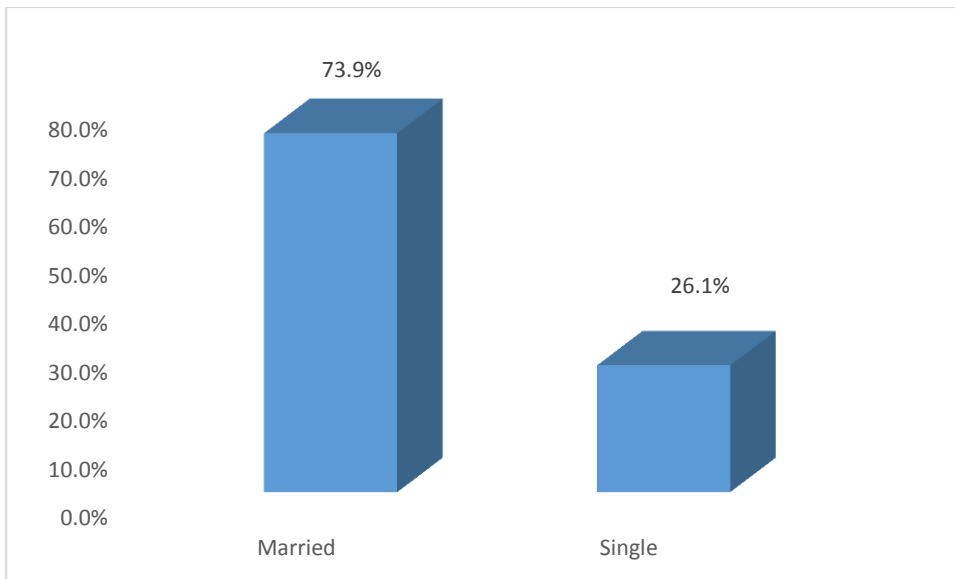


Figure 4.1: Marital Status

Out of the 377 participants in the research, 73.9% were married and 26.1% were single. The research mostly consisted of married couples. 73.9% of the 337 participants were classified as married, showing a significant bias towards married persons in the research group. The demographic distribution may add bias, since marital status might impact financial dynamics, decision-making processes, and economic obligations. Therefore, any inferences made from the study's results should be understood in light of this biased portrayal.

4.3.2 Highest Level of Education

The respondents were asked to indicate their highest level of education.

Their responses were as shown in figure 4.2.

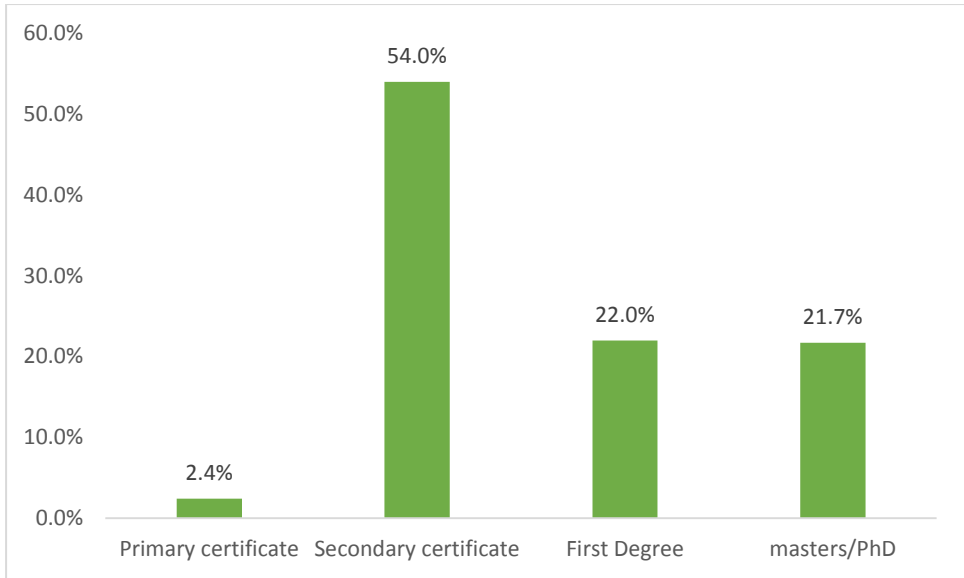


Figure 4.2: Highest Level of Education

Figure 4.3 shows that 54.0% of respondents had secondary education, 21.7% had a master's degree, 22.0% had a bachelor's degree, and 2.4% had a basic certificate. The results indicate that a significant portion of the respondents were well educated, enabling them to provide reliable information for this study. The participants' educational background might enhance the credibility and trustworthiness of the information collected in the research. Increased education levels are often linked with improved analytical abilities, critical thinking, and a better ability to express financial intricacies. The research might benefit from a more comprehensive and perceptive dataset, which could result in more detailed and well-informed results.

4.3.3 Age of the Respondents

The respondents were asked to indicate their age bracket. Their responses were as shown in Table 4.3.

Table 4.4 Age of the Respondents

	Frequency	Percent
18-30 years	44	11.6
31-40 years	184	48.8
41-50 years	108	28.6
Over 50 years	41	10.8
Total	377	100.0

Source: Research Data (2024)

The data in table 4.3 reveals that 48.8% of the participants were aged 31-40 years, 28.6% were aged 41-50 years, 11.6% were aged 18-30 years, and 10.8% were over 50 years old. The results indicate that a significant portion of the participants were older, allowing them to provide reliable information for the study. Having older responders may enhance the study's credibility. Elderly adults often have a wide range of life experiences, including different financial circumstances and encounters with various economic environments. Enhancing the dataset with detailed insights and historical context might improve the depth and trustworthiness of the information collected.

4.3.4 Source of Income

The respondents were asked to indicate their source of income. Their responses were as shown in Figure 4.3.

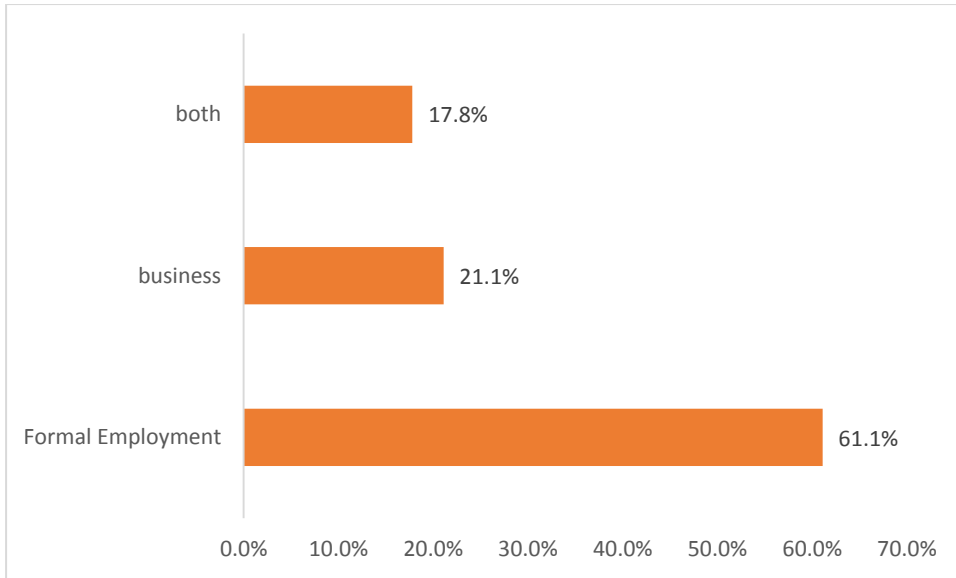


Figure 4.3: Source of Income

The survey revealed that 61.1% of the respondents were officially employed, 21.1% were self-employed, and 17.8% had a combination of both. Most responders were officially employed. The presence of formal job among participants might greatly impact the results of the research. Employed folks often possess a more secure income, have access to financial tools, and may have a greater comprehension of financial concepts. As a result, their views on microfinance services, financial literacy, and financial wellness may be more knowledgeable and sophisticated. This might improve the overall quality and dependability of the data gathered in the research.

4.3.5 Monthly income in Ksh

The respondents were asked to _____ indicate their monthly income. Their responses were as shown in Table 4.5.

Table 4.5 Monthly income in Ksh

	Frequency	Percent
Below 50,000	69	18.3
51,000-100,000	144	38.1
101,000-150,000	151	40.0
Above 200,000	13	3.4
Total	377	100

Source: Research Data (2024)

The survey revealed that 40% of respondents earned between 101,000-150,000 Ksh per month, 38.1% earned between 51,000-100,000 Ksh per month, 18.3% earned below Ksh 50,000, and 3.4% earned over Ksh 200,000 per month. The bulk of respondents were earning between 101,000-150,000 Ksh each month.

4.4 Micro-Credit Services

The first objective of the study was to establish the effect of micro-credit services on financial health of women members of selected microfinance banks in Kenya. To this effect, the respondents were asked to indicate the extent to which they agreed or disagreed with each of the following statements on a scale of 1-5 where 1= strongly disagree and 5 strongly agree. The findings were presented in means and standard deviations as tabulated below;

Table 4.6 Micro-Credit Services

Statements	Mean	Std. Deviation
Microfinance are flexible to issue loans to me using my cash flow from business which aid in new entrepreneurship activities	3.85	.865
Microfinance is able to issue loans to me using business network as collateral which help in expansion of existing enterprises	3.91	.850
Microfinance is able to support my business with loans at a lower interest rate compared to banks	3.98	.960
Loans from Microfinance has helped me increase my stocks	4.11	.798
Loans from Microfinance has helped me increase my sales revenue	4.04	.870
Loans from Microfinance has helped me expand my business into new areas	4.24	3.133
Microfinance institution has customized its loans to my business needs which have helped in skills development	4.10	.883
Loans have facilitated the growth of my business	4.22	.824
Composite Mean	4.05	1.147

Source: Research Data (2024)

The study established that loans from Microfinance had helped the women increase their businesses into new areas as indicated by a mean of 4.24; loans have facilitated the growth of the women's businesses as indicated by a mean of 4.22; Loans from Microfinance has helped me increase my stocks as indicated by a mean of 4.11; microfinance institution had customized its loans to the women's business needs which had helped in skills development as shown by a mean of 4.10; loans from Microfinance had helped them increase their sales revenue as indicated by a mean of 4.04; microfinance was able to support their business with loans at a lower interest rate compared to banks as shown by a mean of 3.98; microfinance was able to issue

loans to them using business network as collateral which helped in expansion of existing enterprises as indicated by a mean of 3.91 and microfinance was flexible to issue loans to the women using their cash flow from business which aided in new entrepreneurship activities as shown by a mean of 3.85.

4.5 Micro-Savings Services

The respondents were further asked to indicate the extent to which the following statements regarding micro-savings services offered by microfinance institutions and how they relate with financial health of women members of microfinance banks on a scale of 1-5 where 1= strongly disagree and 5 strongly agree. The findings were as presented below;

Table 4.7 Micro-Savings Services

	Mean	Std. Deviation
Microfinance has taught me the importance of educational savings	4.06	2.750
Savings with Microfinance offer me an opportunity to borrow loans	3.97	.907
The pattern of my savings in the microfinance determine the loan advances I can be allowed	4.37	2.740
My savings in the microfinance have been used as collateral for loans particularly health promotional savings	3.82	.741
My frequency of deposits in the Microfinance determine the size of a loan I can access from my Microfinance bank	3.89	.839
Savings services offered by our micro finance bank have enabled me set aside some funds for the future of my business	4.10	.832
Saving services have enabled me distinguish between short term and long term savings	4.13	.816
Saving services have enabled me strike a balance between future consumption and business growth	4.24	2.234
Composite Mean	4.07	1.482

Source: Research Data (2024)

As shown in the table above, the pattern of the women's savings in the microfinance determined the loan advances respondents was allowed as indicated by a mean score of 4.37; saving services had enabled respondents to strike a balance between future consumption and business growth as shown by a mean score of 4.24; saving services had enabled the women to distinguish between short term and long term savings as shown by a mean of 4.13; savings services offered by the micro finance bank had enabled respondents set aside some funds for the future of their businesses as indicated by a mean score of 4.10; microfinance had taught the women the importance of educational savings as indicated by a mean score of 4.06; savings with microfinance offered them an opportunity to borrow loans to a great extent as shown by a mean score of 3.97; the women frequency of deposits in the Microfinance determined the size of a loan they accessed from the Microfinance bank to a great extent as shown by a mean score of 3.89 and the respondents savings in the microfinance had been used as collateral for loans particularly health promotional savings to a great extent as indicated by a mean score of 3.82.

4.6 Micro-Insurance Services

The respondents were further asked to indicate the extent to which they agreed or disagreed with the following statements regarding micro-insurance services offered by microfinance institutions and how they relate with financial health of women members of microfinance banks on a scale of 1-5 where 1= strongly disagree and 5 strongly agree. The findings were as tabulated below;

Table 4.8 Micro-Insurance Services

Statements	Mean	Std. Deviation
Microfinance provide services at a lower cost to attract more customers	4.06	2.750
Microfinance focus on efficiency in service to gain price advantage	3.97	.907
Microfinance can withstand competition due to low prices of services hence better market survival	4.37	2.740
Microfinance focus on specialization to increase profit margins	3.82	.741
Microfinance use technology to minimize the costs, hence increased profit margins	3.89	.839
Micro insurance has enabled me to develop a life insurance and retirement savings plan	4.10	.832
Micro insurance has facilitated the acquiring of health insurance as well as property insurance	4.13	.816
Composite Mean	4.04	1.375

Source: Research Data (2024)

The study found that respondents agreed statements regarding micro-insurance services offered by microfinance institutions and how they relate with financial health of women members of microfinance banks to a great extent as shown by a composite mean of 4.04 in that; microfinance withstood competition due to low prices of services hence better market survival as indicated by a mean score of 4.37; micro insurance had facilitated the acquiring of health insurance as well as property insurance as shown by a mean score of 4.13; micro insurance had enabled the women to develop a life insurance and retirement savings plan as indicated by a mean score of 4.10; microfinance provided services at a lower cost to attract more customers as

shown by a mean score of 4.06; microfinance focused on efficiency in service to gain price advantage as shown by a mean score of 3.97; microfinance used technology to minimize the costs, hence increased profit margins as indicated by a mean of 3.89 and the women agreed that microfinance focused on specialization to increase profit margins to a great extent as indicated by a mean score of 3.82.

4.7 Financial Literacy

The fourth objective of the study was to determine the moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya. The respondents were therefore asked to indicate the extent to which they agreed with the following statements regarding financial literacy by microfinance institutions and how they relate with financial health of women members of microfinance banks on a scale of 1-5 where 1= strongly disagree and 5 strongly agree. The table below presents the findings;

Table 4.9 Financial Literacy

	Mean	Std. Deviation
In addition to my savings plan I also I have an investment plan	3.98	.738
Savings management literacy has made me to regularly monitor returns on my investments	3.95	.809
I diversify my investments and change them depending on the returns/yields	4.17	2.756
An investment with a high return is likely to be high risk	3.95	1.027
Insurance literacy has made me know the different micro insurance policies in the market	3.85	.961
I do not have any information about microfinance services that are appropriate for my business	3.69	1.225
Financial literacy has made me gain debt management literacy	4.06	.911
Composite Mean	3.95	1.203

Source: Research Data (2024)

Table 4.9 shows that the women agreed with financial literacy by microfinance institutions and how they relate with financial health of women members of microfinance banks to a great as shown by composite mean of 3.95 in that; respondents diversified their investments and changed them depending on the returns/yields as indicated by a mean score of 4.17; financial literacy had made respondents to gain debt management literacy as indicated by a mean score of 4.06; in addition to the respondents savings plan they also had investment plans as shown by a mean score of 3.98; savings management literacy had made the women to regularly monitor returns on their investments as indicated by a mean score of 3.95; investments with high returns were likely to be high risk as indicated by a mean score of 3.95; insurance literacy had made respondents know the different micro insurance policies in the market as shown by a mean score of 3.85 and respondents did not have any information about microfinance services that were appropriate for their business to a great extent as shown by a mean score of 3.69.

4.8 Financial Health

The respondents were finally tasked with indicating the extent of their agreement with the following statements on financial health of their businesses on a scale of 1-5 where 1- strongly disagree and 5 - strongly agree. The findings were as tabulated below;

Table 4.10 Financial Health

		Std.
	Mean	Deviation
Saving has provided the ability to manage every day finances	4.19	.800
Microfinance services has enabled me to be able to cope with risks	4.26	2.754
Microfinance has made me gain the ability to invest in livelihoods and future	4.23	.845
Composite Mean	4.22	1.466

Source: Research Data (2024)

Microfinance services had enabled respondents to be able to cope with risks to a great extent as shown by a mean score of 4.26; microfinance had made respondents to gain the ability to invest in livelihoods and future to a great extent as shown by a mean score of 4.23 and savings had provided the ability to manage every day finances to a great extent as indicated by a mean score of 4.19.

4.9 Diagnostic Tests

Diagnostic tests were completed before running the regression model. In relation to this study the diagnostic tests that were done include Multicollinearity test, linearity Homoscedasticity Test and hausman test.

4.9.1 Normality Tests

To test for normality, the researcher used the Shapiro-Wilk test. Below are the null hypotheses as well as the alternative hypotheses.

H0: the data was not normal.

H1 the data is normal

A p-value more than 0.05,

would lead to rejecting the null hypothesis and vice versa.

The

table 4.25 below summarizes the outcomes

Table 4.11: Shapiro-Wilk Test of Normality

Variables	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Micro-credit services	.288	337	.331	.747	.331	.401
Micro-saving services	.364	337	.331	.656	.331	.401
Micro-insurance services	.329	337	.331	.703	.331	.401
Financial literacy	.314	337	.331	.687	.331	.401
financial health	.349	337	.331	.616	.331	.401

Source: Research Data (2024)

According to the findings, the Shapiro-Walk values for each of the following categories of services: micro-credit services, micro-saving services, micro-insurance services, financial literacy, and financial health were each 0.401. The significant values measured by the Kolmogorov-Smirnov test were found to be 0.331 for each of the following categories: micro-credit services, micro-saving services, micro-insurance services, financial literacy, and financial health. A p-value that was greater than 0.05 was found in the data, which led to the rejection of the null hypothesis and the acceptance of the alternative hypothesis. This indicates

that the data was found to be regularly distributed, as shown by the normality test. The aforementioned data was therefore adequate for use in directing parametric tests such as analysis of variance (ANOVA), Pearson's correlation, and regression analysis.

4.9.2 Linearity Test

In order to determine whether or not there is a link between the error terms over different time periods, linearity tests were carried out. A test known as the Durbin-Watson test was used in order to investigate linearity. Due to the fact that the Durbin-Watson measurement was 1.919, which is almost equivalent to 2, it is possible to draw the conclusion that the data set did not exhibit any linearity.

Table 4.12: Linearity Test

Model	Durbin-Watson
1	1.919

Source; Research Data (2024)

- a. Predictors: (Constant), micro-credit services, micro-saving services, Micro-insurance services, and financial literacy
- b. Dependent Variable: Financial health

4.9.3 Multicollinearity Test

The statistical concept of multicollinearity refers to a situation in which more than one predictor variable exhibits a high degree of correlation with one another. The presence of strong correlations between independent variables is a scenario that should be avoided. In circumstances in which there is at least one linear connection between some of the variables, perfect solutions are possible. According to some,

multicollinearity does exist. An examination of multicollinearity was performed on the data that was gathered. There was an application of the variable's VIF value. A result in which the value of the VIF is less than 10 indicates that multicollinearity does not make an appearance. According to the findings of the study, the VIF value was less than 10, which indicates that there was no multicollinearity present. It can be seen in Table 4.27 that the results of the multicollinearity test were as expected.

Table 4.13: Multicollinearity Test

	Colinearity Statistics	VIF
	Tolerance	
Micro-credit services	.500	2.000
Micro-saving services	.608	1.646
Micro-insurance services	.633	1.580
Financial literacy	.493	2.027
Financial health	.242	2.083

Source: Research Data (2024)

4.9.4 Homoscedasticity Test

It was determined whether or not homoscedasticity was present by using the Breusch-Pagan test. The assumption that the error terms follow a normal distribution is the foundation upon which this test is carried out. The test is based on the assumption that the variance would remain constant. The conclusion that follows is that the null hypothesis is rejected in favor of the alternative hypothesis, which states that the variance does not remain constant, if the p-value is very significant. As

can be seen in the following results, the p value is higher than 0.05, which indicates that the error term is constant.

Table 4.14: Test for Homoscedasticity

Breusch-Pagan / Cook-Weisberg test for Homoscedasticity

Ho: Constant variance

Variables: fitted values of net profit

chi2 (1)	=	1.34
Prob> chi2	=	0.248

Source: Research Data (2024)

On the basis of the level of output, the values that were obtained were more than 0.05; hence, there is not a significant difference between the dependent variables and the independent variables that were examined.

4.10 Correlation analysis

Correlational analysis using Pearson’s product moment technique was done to determine the relationship between of microfinance services and financial literacy on financial health of women members of selected microfinance banks in Kenya. Results of the correlation are presented in Table 4.15.

Table 4.15. Correlations

		Microfinance Services	Financial Literacy	Financial Health
Microfinance Services	Pearson Correlation	1	.417**	.331**
	Sig. (2-tailed)		0	0
	N	373	373	372
Financial Literacy	Pearson Correlation	.417**	1	.194**
	Sig. (2-tailed)	0		0
	N	373	377	376
Financial Health	Pearson Correlation	.331**	.194**	1
	Sig. (2-tailed)	0	0	
	N	372	376	376
** Correlation is significant at the 0.01 level (2-tailed).				

The results in Table 4.15 shows that there is a significant positive relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya ($r = 0.331$). This implies that there is a weak association between microfinance services and financial health of women members of selected microfinance banks in Kenya which is significant. The findings also reveal that there is a significant positive relationship between financial literacy and financial health of women members of selected microfinance banks in Kenya ($r = .194$, $p\text{-value} < 0.05$), thus implying that financial literacy has a positive and significant relationship with financial health of women members of selected microfinance banks.

4.11 Regression Analysis

The multiple regression model was used to determine the association between microfinance services and the financial health of selected women

microfinance banks in Kenya. This was done after the diagnostic tests revealed that the assumptions of the multiple regression model would not be broken. When doing regression analysis, it was necessary to examine the coefficient of determination, the significance of the model, and the model coefficients.

Table 4.16: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.332	0.110	0.103	1.00442

Dependent Variable: financial health among women members of selected microfinance banks in Kenya

Predictors: (Constant), micro-credit services, Micro-saving services, and Micro-insurance services

Source: Research Data (2024)

The study used the coefficient of determination, also known as R squared, in order to ascertain the impacts of certain predictor factors on the financial health of women who were members of certain microfinance institutions in Kenya. The outcomes of the research suggest that the value of the R-square was 0.110, which indicates that the chosen predictor variables explain 11% of the changes in financial health among women who are members of selected microfinance banks in Kenya. The R-square column represents the degree to which the independent variables are able to accurately predict the outcome. An R value of 0.332 indicates that the predictor factors and the response variable have a statistically significant connection, as shown by the findings of the research.

Table 4.17: ANOVA of the Regression

	Sum	of	Mean		
	Squares	df	Square	F	Sig.
Regression	45.994	3	15.331	15.197	.000b
Residual	371.261	368	1.009		
Total	417.254	371			

Dependent Variable: financial health among women members of selected microfinance banks in Kenya

Predictors: (Constant), micro-credit services, Micro-savingservices, Micro-insurance services

Source: Research Data (2024)

Results of the analysis of variance are shown in Table 4.31. Due to the fact that the P value was 0.000, which is lower than the critical p value of 0.05, the model was deemed to be statistically significant in its entirety. This was confirmed by a F statistic of 15.197, which indicates that the selected predictor variables are good predictors of financial health among women who are members of selected microfinance banks in Kenya.

Table 4.18: Coefficient of Regression

	Unstandardized		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.712	0.377		4.544	0
Micro-credit services	0.253	0.092	0.159	2.765	0.006
Micro-saving services	0.219	0.081	0.154	2.713	0.007
Micro-insurance services	0.147	0.081	0.105	1.819	0.07

Source: Research Data (2024)

Financial health among women members of selected microfinance banks in Kenya = $1.712 + 0.253X_1 + 0.219X_2 + 0.147X_3 + \epsilon$

The findings that are shown in table 4.19, which can be seen above, demonstrate the statistical significance of the predictor variables that are included in the study model. Furthermore, it presents the t-ratios, in addition to the standard error and the estimate of the variables that are independent. Assuming that all of the other independent variables are kept at a value of zero, the regression model that was shown earlier indicates that the degree of financial well-being among women in Kenya who are members of selected microfinance banks is 1.712. This is provided that all of the other variables are kept at their default values.

According to the data shown in Table 4.32, it is obvious that the provision of micro-credit services had a positive and substantial influence on the financial health of women who were selected as members of microfinance banks in Kenya ($\beta = 0.253$, $p = 0.006 < 0.05$). This is evident from the fact that the data shows

that the impact was positive. The conclusion that can be inferred from this is that an increase in the supply of micro-credit services would result in a 0.253-unit improvement in the financial health of women who are members of selected microfinance banks in Kenya. This is the conclusion that can be derived from this.

Based on the findings of the research, it can be inferred that the use of micro-saving services had a noteworthy and favorable influence on the financial health of women who were members of certain microfinance banks in Kenya ($\beta = 0.219$, $p = 0.007 < 0.05$). The conclusion that can be inferred from this is that if there is an increase in the number of microsaving services, the financial health of women in Kenya who are members of chosen microfinance banks will improve by 0.219 units. This is the conclusion that can be derived from this.

Based on the results obtained from further research, it can be inferred that the provision of micro-insurance services had a noteworthy and favorable influence on the financial health of women who were members of certain microfinance banks in Kenya ($\beta = 0.147$, $p = 0.07 > 0.05$). It is possible to make the conclusion that an increase in the supply of micro-insurance services would result in a 0.147-unit improvement in the financial health of women in Kenya who are members of selected microfinance banks. This is the conclusion that can be derived from this.

4.12 The moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya

The second objective of the research was to ascertain the moderating influence that financial literacy has on the connection between microfinance services and the financial health of women who are members of selected microfinance banks in

Kenya. For the purpose of testing the null hypothesis that financial literacy does not have a significant moderating impact on the connection between microfinance services and financial health of women members of selected microfinance banks in Kenya, a linear multiple regression analysis was used. A single score was developed as the result of microfinance services and financial literacy in order to accurately represent the combined influence of both elements. However, if one were to obtain such a score by using the method of straight multiplication, there was a possibility that the multicollinearity between the variables would increase. The approximation of the linear regression coefficients would be affected significantly as a result of this. Consequently, the issue was resolved by transforming the ratings for microfinance services and financial literacy into a Z score with a mean of zero and a standard deviation of one. This resulted in the problem being fixed. In order to get the interaction variable, the two standard variables of microfinance services and financial literacy were multiplied together, as can be seen in Table 4.33.

Table 4.19: Moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya

(a.) Model Summary			
Model	R	R Square	Adjusted R Square
1	.774 ^a	.599	.589
2	.782 ^b	.611	.591
3	.793 ^c	.628	.599

Source: Research Data (2024)

The findings of the linear regression experiment are shown in Table 4.32, which can be seen above. The R Square value for the third model was 0.628, which indicates that combinations of financial literacy and microfinance services accounted for 31% of the

difference in the financial health of women who were members of selected microfinance banks in Kenya.

Table 4.20: Goodness-of-Fit ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	214.212	1	214.212	59.686	.000 ^b
	Residual	1,202.315	335	3.589		
	Total	1,416.527	336			
2	Regression	218.741	2	109.370	30.680	.000 ^c
	Residual	1,190.71	334	3.565		
	Total	1,409.451	336	109.370		
3	Regression	224.755	3	74.918	21.403	.000 ^d
	Residual	1,165.5	333	3.500		
	Total	1,390.255	336			

Source: Research Data (2024)

Based on Table 4.34 the p-value was less than 0.05, which indicates that the model was significant overall. This indicates that financial literacy had a significant moderating impact on the connection between microfinance services and the financial health of women who were members of selected microfinance banks in Kenya. Both financial literacy and microfinance services were significant in terms of individual significance. This was due to the fact that the p-values were less than 0.05.

Table 4.21: Beta Coefficients

Model		Unstandardized Coefficients	Standardized Coefficients	T-value	Sig.
		B	Beta		
1	(Constant)	7.954		5.034	.000
	Micro finance services	.589	0.774	7.726	.000
2	(Constant)	7.795		4.931	.000
	Micro finance services	.672	.882	6.372	.000
	Financial literacy	-.079	-.156	-1.127	.267
3	(Constant)	.759		.136	.893
	Micro finance services	1.015	1.332	3.600	.001
	Financial literacy	.415	.820	1.083	.286
	Zscore (Micro finance services x Financial literacy)	-.023	-1.335	-1.311	.198
a. Dependent Variable: Financial health of women members of selected microfinance banks in Kenya					
b. Predictors: (Constant), Micro finance services					
c. Predictors: (Constant), Micro finance services, Financial literacy					
d. Predictors: (Constant), Micro finance services, Financial literacy, Z-score(Micro finance services x Financial literacy)					

Source: Research Data (2024)

The prediction equation that was derived from this was as follows: financial health of women members of selected microfinance banks in Kenya = 1.015 microfinance services + 0.415. It was found that the combination of financial literacy and microfinance services had a greater influence on the financial health of women members of selected microfinance banks in Kenya. According to one interpretation, if there was a one-unit rise in both financial literacy and microfinance services, then the financial health of women who are members of chosen microfinance banks in Kenya would improve by an average of 1.119 units and 0.689 units, respectively.

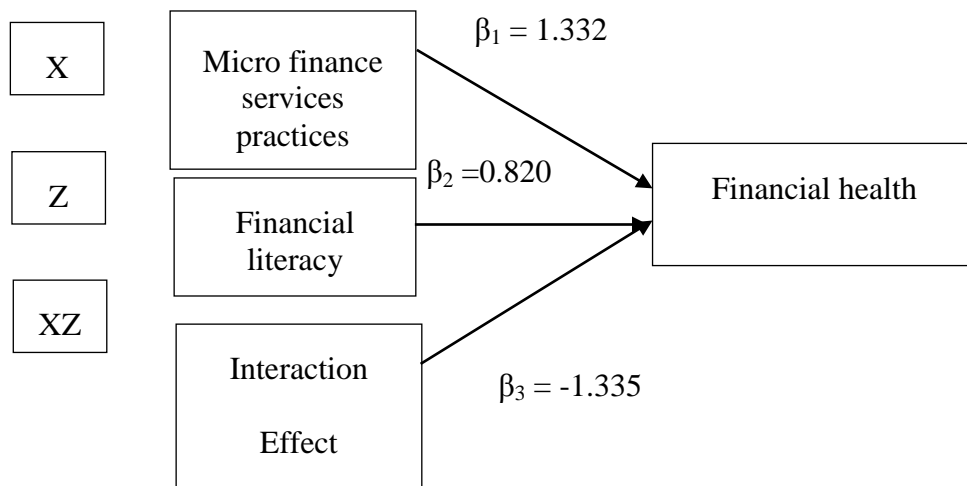


Figure 4.4: Moderating Path Diagram

4.13 Hypothesis Test Results

The first objective of the study sought to examine the effect of micro-credit services on financial health of women members of selected microfinance banks in Kenya. The objective hypothesis is as illustrated below

HO₁: Micro-credit services have no effect on financial health of women members of selected microfinance banks in Kenya

The study rejected the null hypothesis that micro-credit services have no effect on financial health of women members of selected microfinance banks in Kenya and concluded that micro-credit services have an effect on financial health of women members of selected microfinance banks in Kenya.

The second objective of the study sought to establish the effect of micro savings services on financial health of women members of selected microfinance banks in Kenya. The objective hypothesis is as illustrated below

HO₂: Micro-saving services have no effect on financial health of women members of selected microfinance banks in Kenya

The study rejected the null hypothesis that micro-saving services have no effect on financial health of women members of selected microfinance banks in Kenya and concluded that micro-saving services have an effect on financial health of women members of selected microfinance banks in Kenya.

The third objective of the study sought to find out the effect of business micro-insurance services on financial health of women members of selected microfinance banks in Kenya. The objective hypothesis is as illustrated below

HO₃: Micro-insurance services have no effect on financial health of women members of selected microfinance banks in Kenya

The study rejected the null hypothesis that micro-insurance services have no effect on financial health of women members of selected microfinance banks in Kenya and concluded that micro-insurance services have an effect on financial health of women members of selected microfinance banks in Kenya.

The final objective of the study sought to determine the moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya. The objective hypothesis is as illustrated below

HO₄: Financial literacy does not moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya

The study rejected the null hypothesis that financial literacy does not moderate the relationship between microfinance services and financial health of women

members of selected microfinance banks in Kenya and concluded that financial literacy moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya.

4.14 Discussion of Findings

4.14.1 Effect of Micro-credit services on financial health among women members of selected microfinance banks in Kenya

The first objective of the study sought to examine the effect of micro-credit services on financial health of women members of selected microfinance banks in Kenya. The study rejected the null hypothesis that micro-credit services have no effect on financial health of women members of selected microfinance banks in Kenya and concluded that micro-credit services have an effect on financial health of women members of selected microfinance banks in Kenya. Similar to the study findings, Idris and Agbim (2015) looked at the effectiveness of micro-credit in helping to reduce poverty among businesswomen in Nasarawa State, Nigeria. In particular, the research looked at how different forms of financial aid—including microcredit, which may be used to start a business interacted with the possibility of self-employment and increased financial independence. The study relied on a survey research design and a systematic sampling approach to choose participants to complete the questionnaires. Micro-credit has a substantial impact on learning, employment, economic independence, and self-sufficiency, as shown by the study's findings. It was suggested that more people be made aware of the benefits of micro-credit in terms of access to higher learning, independent income generation, economic independence, and professional development.

4.14.2 Effect of Micro-saving services on financial health among women members of selected microfinance banks in Kenya

The second objective of the study sought to establish the effect of micro savings services on financial health of women members of selected microfinance banks in Kenya. The study rejected the null hypothesis that micro-saving services have no effect on financial health of women members of selected microfinance banks in Kenya and concluded that micro-saving services have an effect on financial health of women members of selected microfinance banks in Kenya. Similar to the study findings, Abiola (2016) studied mobilization for micro savings innovations and decrease in poverty level in Nigeria, targeting the underprivileged and self-employed individuals. The generated results indicated that the savings rate by the low-income people grew by 160% and has already contributed to alleviation of extreme poverty, as a result of the emergence of enterprises. A study by Hulme, Moore and Barriento (2009) sought to assess the insurance role of micro-savings. Through review of existing literature, the study findings demonstrated the role of micro-savings in attaining various insurance needs even as they remain neglected element of micro financial services. Based on the findings, it is recommended both government and individuals to give emphasis on the adoption of micro savings owing to its potential to eliminate economic insecurity faced by the low class.

4.14.3 Effect of Micro-insurance services on financial health among women members of selected microfinance banks in Kenya

The third objective of the study sought to find out the effect of business micro-insurance services on financial health of women members of selected microfinance banks in Kenya. The study concluded that micro-insurance services have an effect on financial health of women members of selected microfinance banks in Kenya.

Similar to the study findings, Nzembela and Mazambani (2015) investigated the role of micro insurance in protecting the poor. In this regard, the researchers reviewed the factors influencing uptake of micro insurance amongst low-income people in South Africa. Results of the study indicate that the essential factors are; remoteness of the market, lack of insurance information and the presence of substitute risk-coping approaches. In essence, micro-insurance is not novel. Several of the forerunners of insurance, including the Roman funeral guilds, engaged in risk pooling and risk transmission (Richard, 2011). Products like industrial life insurance and mutual aid associations have been around since the late 19th and early 20th centuries, so they are not exactly cutting-edge. Credit unions and cooperatives, some of which branched out to form their own insurance firms, paved the way for the processes of Micro insurance. At the beginning, the scope of micro-insurance was limited to credit life products that discharged the loan balance upon the borrower's demise. Insurers and specialized middlemen quickly lowered prices to compete for customers in the credit life industry. Premiums dropped to price-sensitive levels, and service providers introduced new forms of protection for their clients (Gerrit, 2014).

4.14.4 Moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya

The final objective of the study sought to determine the moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya. The study concluded that financial literacy moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya. Similar to the study findings, Wafula (2017)

investigated the impact that financial literacy has on the level of financial inclusion among small-scale farmers in Trans Nzoia County. The findings compelled the conclusion that small-scale farmers' access to and use of financial services were influenced by their level of financial literacy regarding debt management, savings, financial planning, and investment activities. There was a found link between financial literacy and increased financial inclusion.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This is the last chapter of this study and has the results in a summarized way for each objective, conclusions, recommendations based on findings and ends with a suggestion for further studies.

5.2 Summary

The main study objective was to assess the effect of microfinance services and financial literacy on financial health of women members of selected microfinance banks in Kenya. This study is based on five objectives, namely: to determine the effect of micro-credit services, micro-saving services, micro-insurance services on financial health of women members of selected microfinance banks in Kenya and to determine the moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya. The study was guided by empowerment theory, finance growth theory and Schumpeter's theory of innovation. The study adopted positivism philosophy to explore a true reality regarding financial health and use of microfinance services among women in Kenya as this cannot be changed by social actors. This research employed explanatory research design. The target population for this study comprised of 37,773 women members in women members of microfinance banks clients who currently hold active deposit accounts and active loan accounts in the 14 microfinance banks within in Kenya. The researcher adopted a combination of purposive and stratified sampling techniques

to select women members of microfinance banks. The sample size was 384 respondents.

5.2.1 Effect of Micro-credit services on financial health among women members of selected microfinance banks in Kenya

The study revealed that women members of selected microfinance banks in Kenya have ever accessed any micro-credit services and that women members of selected microfinance banks in Kenya were granted micro-credit services. In addition, the study revealed that majority of the respondents were granted between 201,000-300,000 and that the most of the repayment period of micro-credit service granted is between 1-2 years. Also, the study established that interest rate charged on the micro-credit service granted to women members of selected microfinance banks in Kenya was favourable and that most of the women members of selected microfinance banks in Kenya sought credit to cater for school fees

5.2.2 Effect of Micro-saving services on financial health among women members of selected microfinance banks in Kenya

The study established that women members of selected microfinance banks in Kenya have ever accessed any micro-saving services, women members of selected microfinance banks in Kenya have any kind of micro-saving with the MFI in the last five years, women members of selected microfinance banks in Kenya have had normal operating account, women members of selected microfinance banks in Kenya have enjoyed to be security of credit as a result of micro-credit savings and that micro-credit savings have helped women members of selected microfinance banks in Kenya to improve their borrowing capacity

5.2.3 Effect of Micro-insurance services on financial health among women members of selected microfinance banks in Kenya

The study further established that women members of selected microfinance banks in Kenya have ever advanced micro-insurance products from any MFI, women members of selected microfinance banks in Kenya have advanced micro-insurance products for medical insurance, women members of selected microfinance banks in Kenya have been helped by the micro-insurance products advanced in managing risk, women members of selected microfinance banks in Kenya have ever made a claim, women members of selected microfinance banks in Kenya have ever made a claim and being paid and that women members of selected microfinance banks in Kenya they can recommend others for micro insurance services, thus they are satisfied by micro insurance services by microfinance banks in Kenya

5.2.4 Moderating Effect of Financial Literacy on the Relationship between Micro Finance Services and Financial health of Women Members of Selected Microfinance Banks in Kenya

The study rejected the null hypothesis that financial literacy does not moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya and concluded that financial literacy moderate the relationship between microfinance services and financial health of women members of selected microfinance banks in Kenya.

5.2.5 Financial Health among Women Members of Selected Microfinance Banks in Kenya

The study also established that women members of selected microfinance banks in Kenya have received any form of training or advisory service from microfinance in

the last five years, women members of selected microfinance banks in Kenya have received financial training, women members of selected microfinance banks in Kenya have received training or advisory services during borrowing and that training on financial literacy have improved finance management among women members of selected microfinance banks in Kenya.

5.3 Conclusion

The primary purpose of this research was to investigate the impact that micro-credit services have on the financial well-being of women who are customers of certain microfinance institutions in Kenya. Micro-credit services were shown to have a significant and positive link with the financial health of women who were members of selected microfinance banks in Kenya, according to the findings of the research, which were derived from the correlation analysis. A further finding of this research was that the provision of micro-credit services has a positive and significant influence on the financial well-being of women who are members of certain microfinance banks in Kenya. This conclusion was reached via the use of regression analysis. As a result, the findings of this research led the researchers to the conclusion that the provision of micro-credit services makes a positive and significant contribution to the financial health of women who are members of certain microfinance banks in Kenya. We have come to the conclusion that the provision of micro-credit services is a substantial contributor to the good improvements that have occurred in the financial health of women who are members of chosen microfinance banks in Kenya.

The second purpose of the research was to determine the impact that micro-saving services have on the financial health of women who are members of certain microfinance banks in Kenya. Micro-saving services were shown to have a

significant and positive link with the financial health of women who were members of selected microfinance banks in Kenya, according to the findings of the research, which were derived from the correlation analysis. A further finding of this research was that the use of micro-saving services has a positive and significant influence on the financial health of women who are members of certain microfinance banks in Kenya. This conclusion was reached via the utilization of regression analysis. As a result, the findings of this research led the researchers to the conclusion that the provision of micro-saving services has a positive and significant influence on the financial health of women who are associated with certain microfinance banks in Kenya. We have come to the conclusion that the provision of microsaving services is a substantial contributor to the good improvements that have occurred in the financial health of women who are members of chosen microfinance banks in Kenya.

The third purpose of the research was to determine the impact that micro-insurance services have on the financial health of women who are members of certain microfinance banks in Kenya. Through the use of correlation analysis, the research arrived at the conclusion that the provision of micro-insurance services has a significant and positive relationship with the financial health of women who are members of chosen microfinance banks in Kenya. A further finding of this research was that the provision of micro-insurance services has a positive and significant influence on the financial health of women who are members of certain microfinance banks in Kenya. This conclusion was reached via the use of regression analysis. As a result, the findings of this research led the researchers to the conclusion that the provision of micro-insurance services has a positive and significant influence on the financial health of women who are associated with certain

microfinance banks in Kenya. A conclusion has been reached that the provision of micro-insurance services is a substantial contributor to the good improvements that have occurred in the financial health of women who are members of selected microfinance banks in Malawi.

The fourth objective of this study was to ascertain the moderating effect of financial literacy on the relationship between micro finance services and financial health of women members of selected microfinance banks in Kenya. According to the findings, the presence of financial literacy had a significant and positive moderating influence on the link between microfinance services and the financial health of women who were members of selected microfinance banks in Kenya. Therefore, the findings of this research reach the conclusion that financial literacy has a significant and positive moderating influence on the link between microfinance services and the financial health of women who are members of selected microfinance banks in Kenya. It has been determined that the primary factor that contributes to the beneficial impact that microfinance services have on the financial health of women who are members of selected microfinance banks in Kenya is financial literacy.

5.4 Recommendations

The study's findings indicate a significant effect of micro-credit services on the financial health of women members within selected microfinance banks in Kenya. Therefore, microfinance institutions (MFIs), in collaboration with the Central Bank of Kenya and other financial regulatory bodies, should diversify their financial products beyond conventional micro-credit services. Expanding their offerings to include savings accounts, micro-insurance products, and targeted financial education programs tailored to the specific needs of women clients can create a more holistic

approach to financial inclusion. By providing a comprehensive suite of financial services, MFIs can enhance the resilience and financial well-being of women beneficiaries.

The study also established a significant and positive relationship between micro-saving services and the financial health of women members within selected microfinance banks. In light of this, there is a pressing need for targeted educational programs aimed at increasing awareness and comprehension of micro-saving services among women. Strengthening financial literacy will empower women to make informed decisions about saving, thereby optimizing the utility of micro-saving facilities. MFIs, in collaboration with non-governmental organizations (NGOs) and community-based organizations, should implement financial literacy training through women's self-help groups, savings cooperatives, and local community centers. Additionally, mobile banking providers should integrate financial education content within their platforms to enhance accessibility and the adoption of savings solutions.

Furthermore, the study's comprehensive findings indicate a tangible impact of micro-insurance services on the financial health of women members within selected microfinance banks in Kenya. This underscores the critical need for targeted educational initiatives aimed at increasing awareness and understanding of micro-insurance services among women beneficiaries. Strengthening financial literacy in this area will empower women to make informed decisions about insurance coverage, enabling them to mitigate financial risks effectively. The Insurance Regulatory Authority (IRA), in partnership with micro-insurance providers and MFIs, should launch awareness campaigns and educational initiatives through media campaigns, financial workshops, and community outreach programs. Moreover, developing

affordable and flexible micro-insurance products tailored to the specific risks faced by women in informal and rural economies should be a priority.

The study further established that financial literacy plays a moderating role in the relationship between microfinance services and the financial health of women members of selected microfinance banks. Therefore, there is a need to develop and implement integrated financial literacy programs specifically tailored for women clients accessing micro-insurance services. These programs should focus on enhancing their understanding of insurance concepts, coverage details, and the broader financial implications of insurance policies. The Ministry of Education, in collaboration with financial institutions and development partners, should integrate structured financial literacy programs into vocational training and adult education curriculums. Additionally, MFIs should make financial literacy training a mandatory requirement before disbursing loans or offering savings and insurance products to women clients.

At a broader policy level, the National Treasury, in coordination with financial sector regulators, should develop policies that mandate financial literacy as a key component of accessing microfinance services. Incentives should be provided to MFIs that successfully integrate financial education into their service models. Furthermore, financial institutions should be required to conduct periodic impact assessments to evaluate how their services contribute to women's financial well-being. By implementing these measures, microfinance services will not only improve access to financial resources for women but also empower them with the knowledge and tools needed for sustainable financial health and economic independence.

5.5 Suggestions for Further Studies

The study recommends future researchers to investigate the impact of technological interventions, such as mobile banking apps and digital financial platforms, on the acquisition and effectiveness of microfinance services, financial literacy programs, and subsequent financial health outcomes for women. Assess the role of technology in bridging gaps and enhancing engagement.

In addition, the study recommends future studies to conduct longitudinal studies to track the long-term effects of microfinance services and financial literacy on the financial health of women members. This could provide insights into the sustainability of positive outcomes and identify potential challenges or changes in financial behaviour over time.

REFERENCES

- Abiola A, B. (2016). Microsavings mobilization innovations and poverty alleviation in Nigeria. *Savings and Development*, 40(1), 1-28.
- Ackerly, B. A. (1995). Testing the tools of development: credit programmes, loan involvement, and women's empowerment. *IDS bulletin*, 26(3), 56-68.
- Adabugah, T. A. (2019). *Effect of Microcredit On Households Income in The Kassena-Nankana Municipality of the Upper East Region* (Doctoral dissertation).
- Ademola, S. A., Musa, A. S., & Innocent, I. O. (2019). Moderating effect of risk perception on financial knowledge, literacy and investment decision. *American International Journal of Economics and Finance Research*, 1(1), 34-44.
- Adeoti, O. J., Gbadeyan, R. A., & Olawale, A. Y. (2015). The impact of micro-finance institutions credit on the survival of small-and medium-scale enterprises in Irepodun LGA of Kwara state, Nigeria. *The Pacific Journal of Science and Technology*, 16(2), 180-188.
- Alando, T. A. (2014). *An assessment of the effect of micro-insurance on the financial performance of insurance companies in Kenya* (Doctoral dissertation, University of Nairobi).
- Anthias, F. (2001). The material and the symbolic in theorizing social stratification: issues of gender, ethnicity and class. *The British journal of sociology*, 52(3), 367-390.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bernard, D. K. (2015). Microfinance services: Facilitating entrepreneurial success of poor women. *Journal of Review of Contemporary Business Research*, 4(2), 57-66.

- Bernard, D. K., Kevin, L. L. T., & Khin, A. A. (2016). Entrepreneurial success through microfinance services among women entrepreneurs in Sri Lanka: A pilot study and overview of the findings. *International Journal of Economics and Financial Issues*, 6(3).
- Bongomin, G. O. C., Munene, J. C., Ntayi, J. M., & Malinga, C. A. (2017). Financial literacy in emerging economies: Do all components matter for financial inclusion of poor households in rural Uganda?. *Managerial Finance*.
- Brau, C. J. & Woller, G. M., 2004, 'Microfinance: A Comprehensive Review of Existing Literature,' *Journal of Entrepreneurial Finance and Finance Ventures*, 9(1), pp. 1-26
Business, Paris.
- CBK, (2020). Bank Supervision Annual Report 2020. Retrieved on January 5, 2022 from
https://www.centralbank.go.ke/uploads/banking_sector_annual_reports/1375903848_Bank%20Supervision%20Annual%20Report%202020.pdf
- Chikalipah, S. (2018). Do micro savings stimulate financial performance of microfinance institutions in Sub-Saharan Africa?. *Journal of Economic Studies*.
- Churchill, C., & McCord, M. J. (2012). Current trends in microinsurance. *Protecting the poor: A microinsurance compendium*, 2, 8-39.
- Cooper, L. G. (2014). *The impact of microfinance on female entrepreneurs in Tanzania* (Doctoral dissertation, Lake Forest College).
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Daley-Harris, S., & Laegreid, L. (2006). *State of the microcredit summit campaign: report 2006* (pp. 1-66). Washington, DC: Microcredit Summit Campaign.
- Das, K. R., & Imon, A. H. M. R. (2016). A brief review of tests for normality. *American Journal of Theoretical and Applied Statistics*, 5(1), 5-12.
- Dodge, Y., & Jureckova, J. (2000). *Adaptive Regression*. New York, NY: Springer New York.

- Drost, E. A. (2011). Validity and reliability in social science research. *Education Research and perspectives*, 38(1), 105-123.
- Duvendack, M., & Mader, P. (2018). PROTOCOL: Impact of financial inclusion in low- and middle- income countries: a systematic review of reviews. *Campbell Systematic Reviews*, 14(1), 1-58.
- Ekpete, M. S., & Iwedi, M. (2017). Financial intermediation functions of microfinance banks in Nigeria: A vector autoregressive and multivariate approach. *International Journal of Economics and Financial Modelling*, 2(1), 7-24.
- Fadhil, K. K., (2019). *The Empowerment of Women Through Microfinance*. ResaechGate
- Foy, R. D. (2013). Utilizing the participatory social learning theory as a new paradigm to evaluate the International Labour Organization (ILO) assessment of support for growth-oriented women entrepreneurs in Uganda. *Journal of African Studies and Development*, 5(2), 27-32.
- Gonsoulin, M. (2005). Women's rights and women's rites: Religion at the historical root of gender stratification. *Electronic journal of Sociology*, 1, 45-70.
- Graham, J. R. (2000). How Big Are the Tax Benefits of Debt? *Journal of Finance*, 55, 1901-1941.
- Graham, M., & Warren, R. (2011). Women and personal finance: the reality of the gender gap. *Financial Services Authority, Consumer Research*, 7.
- Hamad, R., & Fernald, L. C. (2015). Microcredit participation and women's health: results from a cross-sectional study in Peru. *International journal for equity in health*, 14, 62.
- Hannum, E. (2005). Market transition, educational disparities, and family strategies in rural China: New evidence on gender stratification and development. *Demography*, 42(2), 275-299.
- Herath, H. M. W. A., Guneratne, L. H. P., & Sanderatne, N. (2015). Impact of microfinance on women's empowerment: a case study on two microfinance institutions in Sri Lanka. *Sri Lanka Journal of Social Sciences*, 38(1), 51-61.

- Hudon, M. & Traca, D. (2011). On the Efficiency Effects of Subsidies in Microfinance: An Empirical Inquiry. *World Development*, 39(6), pp 966-973.
- Hulme, D., Moore, K., & Barrientos, A. (2009). *Assessing the insurance role of microsavings*.
- Hung, A., Yoong, J., & Brown, E. (2012). Empowering women through financial awareness and education.
- Idris, A. J., & Agbim, K. C. (2015). Micro-credit as a strategy for poverty alleviation among women entrepreneurs in Nasarawa State, Nigeria. *Journal of Business Studies Quarterly*, 6(3), 122.
- Jahanzeb, Agha & Khan, Saif-ur-Rehman & Bajuri, Norkhairul & Karami, Meisam & Ahmadimousaabad, Aiyoub. (2013). Trade-Off Theory, Pecking Order Theory and Market Timing Theory: A Comprehensive Review of Capital Structure Theories. *International Journal of Management and Commerce Innovations (IJMCI)*. 1. 11-18.
- Johnson, S., & Rogaly, B. (1997). *Microfinance and poverty reduction*. Oxford: Oxfam.
- Jorgensen, T. J. (2020). *Inclusive Financial Wellbeing and Empowerment: An Intersectional Analysis* (Doctoral dissertation, University of Georgia).
- Joseph, N., & JailosMtindya, B. M. (2018). Micro Credit as a Strategy for Poverty Reduction and Empowerment of Women Entrepreneurs. In *17th International Conference on African Entrepreneurship & Small Business* (p. 124).
- Kannadhasan, M. (2007). *Measuring Financial Health of a Public Limited Company Using 'Z' Score Model - A Case Study*. Research Gate
- Kao, L. S., & Green, C. E. (2008). Analysis of variance: is there a difference in means and what does it mean? *Journal of Surgical Research*, 144(1), 158-170.
- Kapper, A., 2007, *Commercialisation of microfinance institutions*. Paris Graduate School of
- Khan R.E.A. & Noreen, S., (2012). Microfinance and women empowerment: A case study of District Bahawalpur (Pakistan). *African Journal of Business Management* Vol. 6(12), pp. 4514-4521.

- Kimoro P.M. (2012). *The impact of microfinance services on women empowerment: a case study of Mwingi District*. Unpublished Thesis University of Nairobi
- Kisaka, S. E., & Mwewa, N. M. (2014). Effects of micro-credit, micro-savings and training on the growth of small and medium enterprises in Machakos County in Kenya. *Research Journal of Finance and Accounting*, 5(7), 43-49.
- Klapper, L., & Lusardi, A. (2020). Financial literacy and financial resilience: Evidence from around the world. *Financial Management*, 49(3), 589-614.
- Kombo, D. K., & Tromp, D. L. (2006). Proposal and thesis writing: An introduction. *Nairobi: Paulines Publications Africa*, 5(1), 814-30.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Krauss, S. E. (2005). Research paradigms and meaning making: A primer. *The qualitative report*, 10(4), 758-770.
- Kumar, A., Schmeler, M. R., Karmarkar, A. M., Collins, D. M., Cooper, R., Cooper, R. A., & Holm, M. B. (2013). Test-retest reliability of the functional mobility assessment (FMA): a pilot study. *Disability and Rehabilitation: Assistive Technology*, 8(3), 213-219.
- Lee, N., & Solana, M. (2013). Beyond Slogans: Good practices in promoting microinsurance. *Microinsurance Paper*, (22).
- Levine, R. F. (2006). *Social class and stratification: Classic statements and theoretical debates*. Rowman & Littlefield.
- Li, D., Moshirian, F., Nguyen, P., & Wee, T. (2007). The demand for life insurance in OECD countries. *Journal of Risk and Insurance*, 74(3), 637-652.
- Likert R. (1932). A technique for the measurements of attitudes. *Archives of psychology*.;140(22):5-55.
- Lusardi, A., & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare? *American economic review*, 98(2), 413-17.
- Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: an overview. *Journal of pension economics & finance*, 10(4), 497-508.

- Mustafa, M., Mazhar, N., Asghar, A., Usmani, M. Z., Razaq, L., & Anderson, R. (2019, May). Digital Financial Needs of Micro-Entrepreneur Women in Pakistan: Is Mobile Money the Answer? In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (pp. 1-12).
- Navajas, S., Schreiner, M., Meyer, R., Gonzalez-Vega, C., & Rodriguez-Meza, J. (2000). Microcredit and the poorest of the poor: Theory and evidence from Bolivia. *World Development*, 28(2), 333-346
- Nawaz, A., (2010). *Performance of Microfinance: The Role of Subsidies. Savings and Development*, 34(1), pp 97-138.
- Nkpoyen, F., & Eteng, G. (2012). Micro-lending as an empowerment strategy for poverty alleviation among women in Yala Local Government Area of Cross River State, Nigeria. *International Journal of Business and Social Science*, 3(18).
- Nzembela, K. V., & Mazambani, M. L. (2015). Role of Microinsurance in Protecting the Poor.
- Oware, O. E. (2012). *The effect of microfinance loans on poverty reduction: A case study of K-Rep bank* (Doctoral dissertation, University of Nairobi, Kenya).
- Owolabi, O. E. (2015). *Microfinance and poverty reduction in Nigeria: A case study of LAPO microfinance bank* (Doctoral dissertation, University of Leeds).
- Poon, J. P., Thai, D. T., & Naybor, D. (2012). Social capital and female entrepreneurship in rural regions: Evidence from Vietnam. *Applied Geography*, 35(1-2), 308-315.
- Preacher, K. J., & Hayes, A. F. (2004). *SPSS and SAS procedures for estimating indirect effects in simple mediation models*. Behavior Research Methods, Instruments & Computers, 36(4), 717–731
- Radermacher, R., & Brinkmann, J. (2011). Insurance for the Poor. *Journal of Business Ethics*, 103(1), 63-76.
- Raihanath, M. P., & Pavithran, K. B. (2019). *Effectiveness of financial inclusion programme in Kerala* (Doctoral dissertation, Cochin University of Science and Technology).

- Sandu, A., Frunza, A., & Unguru, E., (2019). *Ethics in research practice and innovation*. IGI Global
- Sanistasya, P. A., Raharjo, K., & Iqbal, M. (2019). The Effect of Financial Literacy and Financial Inclusion on Small Enterprises Performance in East Kalimantan. *Jurnal Economia*, 15(1), 48-59.
- Sarkar, S. (2000). *The Trade-Off Model with Mean Reverting Earnings: Theory and Empirical Tests* (February 2000). Available at SSRN: <https://ssrn.com/abstract=209789> or <http://dx.doi.org/10.2139/ssrn.209789>
- Seguino, S. (2007). PlusÇa Change? Evidence on global trends in gender norms and stereotypes. *Feminist Economics*, 13(2), 1-28.
- Senanayake, S. M. P., & Premaratne, S. P. (2006). Micro-finance for accelerated development. *Savings and development*, 143-168.
- Siakwah, P. (2010). *Microcredit as a strategy for poverty reduction, Youth and Women Empowerment, Ghana* (Master's thesis).
- Son, J., & Park, J. (2019). Effects of financial education on sound personal finance in Korea: Conceptualization of mediation effects of financial literacy across income classes. *International journal of consumer studies*, 43(1), 77-86.
- Stewart R., Einstein, A., B. & Podolsky, (2010). *What is the impact of microfinance on poor people? A systematic review of evidence from sub - Saharan Africa. Technical report*. Institute of Education. London
- Stolper, O. A., & Walter, A. (2017). Financial literacy, financial advice, and financial behavior. *Journal of business economics*, 87(5), 581-643.
- Taiwo, J. N., Aregan, A. I., & Ailemen, I. O. (2016). Microfinance and poverty alleviation in Southwest Nigeria: empirical evidence.
- Tedeschi, Lewis, P. & Thornhill, A. (2008). *Research Methods for Business Students*, Upper Saddle River, NY: Prentice Hall
- Uyanık, G. K., & Güler, N. (2013). A study on multiple linear regression analysis. *Procedia-Social and Behavioral Sciences*, 106, 234-240.

- Vanroose, A. & D'Espallier, B. (2013). Do Microfinance Institutions Accomplish Their Mission? Evidence from the Relationship between Traditional Financial Sector Development and Microfinance Institutions' Outreach and Performance. *Applied Economics*, 45(15), pp 1965-1982.
- Wafula, I. W. (2017). *The effect of financial literacy on financial inclusion among Small-Scale Farmers in Trans Nzoia County* (Doctoral dissertation, University of Nairobi).
- Warui P.W. (2015). *Influence of Microfinance Services on Empowerment of Women Entrepreneurs in Kibera Constituency, Nairobi County, Kenya*. Unpublished thesis, University of Nairobi.
- Watkins, T.A., (2018) Introduction to Microfinance. World Scientific Publishing Company.
- Weida EB, Phojanakong P, Patel F, Chilton M (2020) Financial health as a measurable social determinant of health. *PLoS ONE* 15(5): e0233359.
- Welsh, E. (2019). Assessing Microfinance as a means of Socioeconomic Empowerment for Vulnerable Women in Jordan. *Policy & Practice: A Development Education Review*. Issue 29
- Yogendrarajah, R. (2011). The Role of Micro Credit on Women Empowerment Through Poverty Alleviation, Self-Employment and Health Nutrition Under Post War Development. *Gumbad Business Review*, 6(2).
- Zeng, Y. (2019). Classical linear regression model: Assumptions and diagnostics test.

APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

TO THE MANAGING DIRECTOR

.....

Dear

RE: REQUEST TO COLLECT DATA FOR ACADEMIC RESEARCH

My name is Jerusha Kerubo Riro and a student in the Master of Science in finance of Kenyatta University. As partial fulfilment of the requirements for the award of the degree, I am required to undertake a research study in order to foster practical skills. Accordingly, I will be conducting a study on the *'the effect of microfinance services on financial health of women members of microfinance banks in Kenya'*, and I have identified your microfinance for purposes of data collection during the study. The purpose of this letter is to seek your authorization to collect data through interviewing some of respondents in your microfinance. Your responses and support during data collection will significant in helping me summarize the study findings as well as the study conclusion. Additionally, I will be able to come up with the necessary recommendations for the study. The data that will be collected will purely be for academic purposes. Finally, the identification of the respondents will be held in confidence.

Your cooperation will be highly appreciated.

Yours Faithfully,

JERUSHA KERUBO RIRO

D58/CTY/PT/26964/2013

APPENDIX II: QUESTIONNAIRE

This questionnaire is divided into SIX sections: A-F. You are requested to complete all the sections to aid the study on Microfinance Services and Financial Health of Women in Kenya. The information you provide will be treated with utmost confidentiality.

Name of Microfinance bank you are registered as a member.....

PART A: Demographic Personal Data

Instructions (tick where appropriate)

1. Marital status

a) Married

b) Single

c) Divorced

d) Widowed

2. Education/academic qualifications

a) Primary

b) Secondary

c) College

d) University

3. Age

a) 18 – 30 years

b) 31 -40 years

c) 41 -50 years

d) Over 50 years

4. Type of business you are doing

a) Small scale

b) Medium scale

c) Large scale

5. Monthly income in Kshs.

a) Below 15,000

b) 16,000 - 30,000

c) 31,000-45,000

d) 46,000 - 60,000

e) Above 60,000

SECTION B: MICRO-CREDIT SERVICES

6. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statements on micro-credit services.

Statements	1	2	3	4	5
Microfinance are flexible to issue loans to me using my cash flow from business which aid in new entrepreneurship activities					
Microfinance is able to issue loans to me using business network as collateral which help in expansion of existing enterprises					
Microfinance is able to support my business with loans at a lower interest rate compared to banks					
Loans from Microfinance has helped me increase my stocks					
Loans from Microfinance has helped me increase my sales revenue					
Loans from Microfinance has helped me increase expand my business into new areas					
Microfinance institution has customized its loans to my business needs which have helped in skills development					
Loan facilities have facilitated the growth of my business					

SECTION C: MICRO-SAVINGS SERVICES

7. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statements on micro-savings services.

Statements	1	2	3	4	5
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Microfinance has taught me the importance of educational savings					
Savings with Microfinance offer me an opportunity to borrow loans					
The pattern of my savings in the microfinance determine the loan advances I can be allowed					
My savings in the microfinance have been used as collateral for loans particularly health promotional savings					
My frequency of deposits in the Microfinance determine the size of a loan I can access from my Microfinance bank					
Savings services offered by our microfinance bank have enabled me set aside some funds for the future of my business					
Saving services have enabled me distinguish between short term and long term savings					
Saving services have enabled me strike a balance between future consumption and business growth					

SECTION D: MICRO-INSURANCE SERVICES

8. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statements on micro-insurance services.

Statements	1	2	3	4	5
Microfinance provide services at a lower cost to attract more customers					
Microfinance focus on efficiency in service to gain price advantage					
Microfinance can withstand competition due to low prices of services hence better market survival					
Microfinance focus on specialization to increase profit margins					

Microfinance use technology to minimize the costs, hence increased profit margins					
Micro insurance has enabled me to develop a life insurance and retirement savings plan					
Micro insurance has facilitated the acquiring of health insurance as well as property insurance					

SECTION E: FINANCIAL LITERACY

9. Using a scale of 1-5, where 1= strongly disagree; 2=disagree; 3=Neutral; 4=agree; 5=strongly agree; Please indicate the extent to which you agree with the following statements on financial literacy.

Statements	1	2	3	4	5
In addition to my savings plan I also I have an investment plan					
Savings management literacy has made me to regularly monitor returns on my investments					
I diversify my investments and change them depending on the returns/yields					
An investment with a high return is likely to be high risk					
Insurance literacy has made me know the different micro insurance policies in the market					
I do not have any information about microfinance services that are appropriate for my business					
Financial literacy has made me gain debt management literacy					

SECTION F: FINANCIAL HEALTH

10. The statements presented below relate to the effect of microfinance services on financial health of women in Kenya. Please indicate by ticking (√) the

answer you consider appropriate for each statement. Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5= Strongly Agree

Statements	1	2	3	4	5
Saving has provided the ability to manage every day finances					
Microfinance services has enabled me to be able to cope with risks					
Microfinance has made me gain the ability to invest in livelihoods and future					

THE END

THANK YOU FOR YOUR PARTICIPATION

APPENDIX III: MICROFINANCE BANKS 2022

1. Faulu MFB
2. Kenya WomenMFB
3. Rafiki MFB
4. SMEP MFB
5. Maisha MFB
6. Caritas MFB
7. Sumac MFB
8. U & I MFB
9. Key MFB
10. Uwezo MFB
11. Muungano MFB
12. Century MFB
13. Daraja MFB
14. Choice MFB

Source: CBK Bank Supervision Report 2022

APPENDIX IV: APPROVAL OF RESEARCH PROPOSAL



KENYATTA UNIVERSITY
OFFICE OF THE EXECUTIVE DEAN GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

P.O. Box 43844, 00100

Website: www.ku.ac.ke

NAIROBI, KENYA

Tel. 020-8704150

Internal Memo

FROM: Executive Dean, Graduate School

DATE: 18th August 2023

TO: Ms. Jerusha Kerubo Riro
c/o Department of Accounting and Finance

REF: D58/CTY/PT/26964/2013

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

=====
This is to inform you that Graduate School Board, at its meeting on 16th August 2023, approved your Research Proposal for the M.Sc. Degree entitled, *Microfinance Services, Financial Literacy and Financial Health of Women Members of Selected Microfinance Banks in Kenya*.

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation and Ethics Review Committee, Kenyatta University.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and Progress Report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your thesis before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

JOHN CDONGI
FOR: EXECUTIVE DEAN, GRADUATE SCHOOL

CC. Chairman, Department of Accounting and Finance

Supervisors:

1. Dr. Salome Musau
c/o Department of Accounting and Finance
Kenyatta University

2. Dr. Charity Njoka
c/o Department of Accounting and Finance
Kenyatta University

APPENDIX V: RESEARCH AUTHORIZATION



KENYATTA UNIVERSITY
OFFICE OF THE EXECUTIVE DEAN GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

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P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 020-8704150

Our Ref: D58/CTY/PT/26964/2013

DATE: 18th August 2023

Director General,
National Commission for Science, Technology and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

**RE: RESEARCH AUTHORIZATION FOR MS. JERUSHA KERUBO RIRO – REG.
NO. D58/CTY/PT/26964/2013**

I write to introduce Ms. Jerusha Kerubo Riro who is a Postgraduate Student of this University. She is registered for M.sc degree programme in the Department of Accounting and Finance.

Ms. Jerusha Kerubo Riro intends to conduct research for a M.sc. Thesis Proposal entitled, *“Microfinance Services, Financial Literacy and Financial Health of Women Members of Selected Microfinance Banks in Kenya.*

Any assistance given will be highly appreciated.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'E. Kimani', written over a circular stamp or watermark.

PROF. ELSHIBA KIMANI
EXECUTIVE DEAN, GRADUATE SCHOOL

APPENDIX VI: RESEARCH PERMIT


REPUBLIC OF KENYA
 National Commission for Science, Technology and Innovation
Ref No: 703945
RESEARCH LICENSE

This is to Certify that Ms. Jorcha Kerubo Niro of Kenyatta University, has been licensed to conduct research in the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu, Nairobi on the topic: MICROFINANCE SERVICE, FINANCIAL LITERACY AND FINANCIAL HEALTH OF WOMEN MEMBERS OF EJECTED MICROFINANCE BANKS IN KENYA for the period ending : 11 September 2024.
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