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Abstract

The World Bank identifies the financial health of women as crucial for poverty reduction and economic development. This study aimed to assess the impact of microfinance services and financial literacy on the financial health of women members of selected microfinance banks in Kenya. Specifically, it examined the effects of micro-credit, micro-savings, and micro-insurance services, as well as the moderating role of financial literacy. Guided by empowerment, gender stratification, finance growth, and information asymmetry theories, the study employed an explanatory research design within a positivist framework. The target population included 37,773 women with active deposit and loan accounts in 14 microfinance banks in Kenya, with a sample size of 384 respondents. Findings revealed that micro-credit, micro-savings, and micro-insurance services significantly enhance the financial health of women. Additionally, financial literacy positively moderates the relationship between microfinance services and financial health. The study recommends that microfinance institutions diversify their financial products beyond traditional micro-credit and implement educational programs to improve awareness and understanding of micro-savings services among women

Keywords: *Micro-finance Services, Financial Health, Microfinance Banks, Micro-Credit Services, Financial Literacy*

1.1 Introduction

According to Stewart, Einstein, and Podolsky (2010), the establishment and growth of microfinance institutions worldwide have the potential to significantly impact the social and economic well-being of women. These effects may include improved income levels and greater control over finances. Microfinance helps businesses achieve greater economic independence,

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access to networks and markets, financial and technological capital, improved ability to make informed financial decisions, investment and savings opportunities, financial budgeting, and improved ability to pay bills and afford basic necessities. It also helps maintain high purchasing power and the ability to pay off debts (Watkins, 2018). Additionally, microfinance enables women to participate in decision-making processes regarding family expenditures and contribute to their families' financial well-being and security.

Microfinance programs, as stated by Warui (2015), help women achieve greater financial stability and overcome barriers that prevent them from accessing formal financial services. These barriers include cultural obstacles, the need for collateral, paperwork requirements, 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.

The regulatory environment for microfinance institutions (MFIs) in Kenya is overseen by the Central Bank of Kenya (CBK). The CBK regulates deposit-taking microfinance institutions (DTMs) under the Microfinance Act of 2006, which aims to promote transparency, financial stability, and consumer protection within the sector (Central Bank of Kenya, 2021). The Microfinance Act has been pivotal in enhancing the credibility and stability of MFIs by setting prudential standards and operational guidelines. Additionally, the CBK has introduced the Kenya

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Financial Sector Stability Report, which addresses emerging risks and ensures regulatory compliance across financial institutions (CBK, 2022).

Kenya's economic landscape significantly influences the operations and growth of microfinance institutions. The country's economic performance has been marked by steady growth, with a GDP growth rate of 4.8% in 2022, despite global economic challenges (World Bank, 2023). This economic growth has created a conducive environment for the expansion of microfinance services. However, the economic conditions also present challenges such as inflation, which affects the lending capacity and repayment rates within MFIs. The informal sector, which constitutes a significant portion of Kenya's economy, heavily relies on microfinance services for capital, underscoring the sector's importance (Kenya National Bureau of Statistics, 2022).

The competitive landscape of microfinance in Kenya is characterized by a mix of traditional banks, DTMs, and other non-bank financial institutions. This competitive environment has led to innovations in financial products and services, such as mobile banking and digital finance solutions, which have increased the accessibility and convenience of microfinance services (FSD Kenya, 2021). Major players in the sector include Kenya Women Microfinance Bank (KWFT), Faulu Microfinance Bank, and SMEP Microfinance Bank. These institutions compete on various fronts, including interest rates, service delivery, and technological advancements, to capture a larger market share (Muthinja & Chipeta, 2018).

1.2 Statement of the Problem

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 examining microfinance services and financial outcomes in diverse contexts, these studies reached consistent conclusions. Researchers from Ghana, such as Alhassan, Hoedoafi, and Braimah (2016), investigated the influence of microfinance on the prosperity of women-owned and operated enterprises. The most significant conclusion was that microloans have the potential to boost the performance of these enterprises. However, this study was conducted in Ghana, not Kenya. Alhassan (2016) researched the impact of microfinance on the performance of small and medium-sized enterprises (SMEs) owned by women in the Tamale Metropolis, finding a positive association between microfinance and enterprise performance. Nonetheless, this study's location in Ghana leaves a gap as it was not conducted in Kenya.

Further, Monge (2016) investigated the effects of microfinance funding on SMEs in Tanzania, finding that microfinance positively impacted the amount of capital produced by businesses. However, this research was conducted in Tanzania, not Kenya. Kanyare and Mungai (2017)

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studied microfinance's influence on SMEs in Wajir County, Kenya. They found a favorable correlation between the financial performance of SMEs and access to savings, financial resources, and training services. However, their study did not specifically focus on women-owned firms but on 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

2.1 Theoretical Framework

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. 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. 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

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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.

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

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

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was recommended that women micro-lending programmes be fortified in 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 o 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.

2.3.2 Micro-savings Services and Financial Health

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.

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

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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

Nzembela and Mazambani (2015) conducted research to explore the contribution of microinsurance to the protection of the poor. They analyzed the factors influencing the adoption of microinsurance among low-income individuals in South Africa, focusing on members of the South African Advertising Research Foundation (SAARF). The study revealed that the most critical factors were market location, lack of information on insurance, and the presence of alternative risk management methods. In contrast, the present research will use microinsurance as an explanatory variable to determine its impact on the financial well-being of female participants. While Nzembela and Mazambani's study targeted adult South Africans who were SAARF members, this study will focus on registered female consumers of microfinance institutions (MFIs) across Kenya.

Similarly, Alando (2014) investigated the effects of microinsurance on Kenya's insurance sector using an analytical survey and correlation analysis. The study's population consisted of ten businesses providing insurance to small enterprises in the healthcare and real estate industries. Secondary sources such as annual reports and financial statements were used to obtain net profit information, while primary data on claims, premiums, and insurance cover costs from 2009 to 2013 were collected through data forms sent to underwriting and financial departments. A regression model demonstrated that microinsurance claims, premiums, and expenses significantly impact the financial performance of insurance companies. Unlike Alando's research, which focused on the financial performance of MFIs underwriting micro-medical and property businesses, this analysis will concentrate on the well-being of women registered with MFIs.

Lee and Solana (2013) investigated effective methods for increasing microinsurance uptake, identifying factors such as mistrust of insurance companies, lack of financial and insurance literacy, uncertainty about the value of future benefits, and high premium costs as significant barriers. They recommended a step-by-step promotional planning model, which included providing context, outlining the current offer, setting SMART objectives, and determining the target recipient base. However, despite offering effective methods for promoting microinsurance, their research did not examine its impact on the financial health of women. This study aims to address this gap by exploring how microinsurance influences the financial well-being of women in Kenya.

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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

Klapper and Lusardi (2020) explored the relationship between financial literacy and resilience. They evaluated financial literacy by questioning the local population on various financial topics such as inflation, credit interest rates, and risk diversification. The findings revealed that one-third of the respondents lacked a fundamental understanding of financial concepts. The study found that individuals with higher education levels, existing customers of financial services, and affluent members of society were more knowledgeable about these financial concepts. Additionally, the research highlighted that loan products with high-interest rates are becoming increasingly accessible, exacerbating consumer risks, particularly among those with low financial literacy.

Sanistasya, Raharjo, and Iqbal (2019) investigated the impact of financial education and involvement on small businesses in East Kalimantan. Using a non-probability census sampling approach, data were collected from 100 small enterprises. An explanatory research design and the Partial Least Square method were employed for data analysis. The study concluded that there is a strong connection between financial literacy and improved company performance. It also found that financial inclusion positively impacts SME performance. While the previous study used financial literacy and financial inclusion as explanatory variables, the current investigation will use financial literacy to moderate the relationship.

Wafula (2017) examined the extent of financial inclusion among small-scale farmers in Trans Nzoia County and the impact of financial literacy on their participation levels. Using a descriptive research approach, data were gathered from 380 farmers via questionnaires and analyzed using inferential and descriptive statistical methods. The study concluded that the financial literacy of farmers in debt management, savings, financial planning, and investment significantly influenced their access to and use of financial services. A positive association was found between increased financial inclusion and higher financial literacy. However, Wafula's focus was on financial inclusion as the dependent variable and did not explore financial health. Furthermore, the study concentrated on small-scale farmers, whereas the present research focuses on women members of microfinance banks (MFBs) in Kenya.

2.5 Conceptual Framework

The framework covers financial health and microfinance services with the intervention of financial literacy. Financial health is the dependent variable. Microfinance services which form

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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.

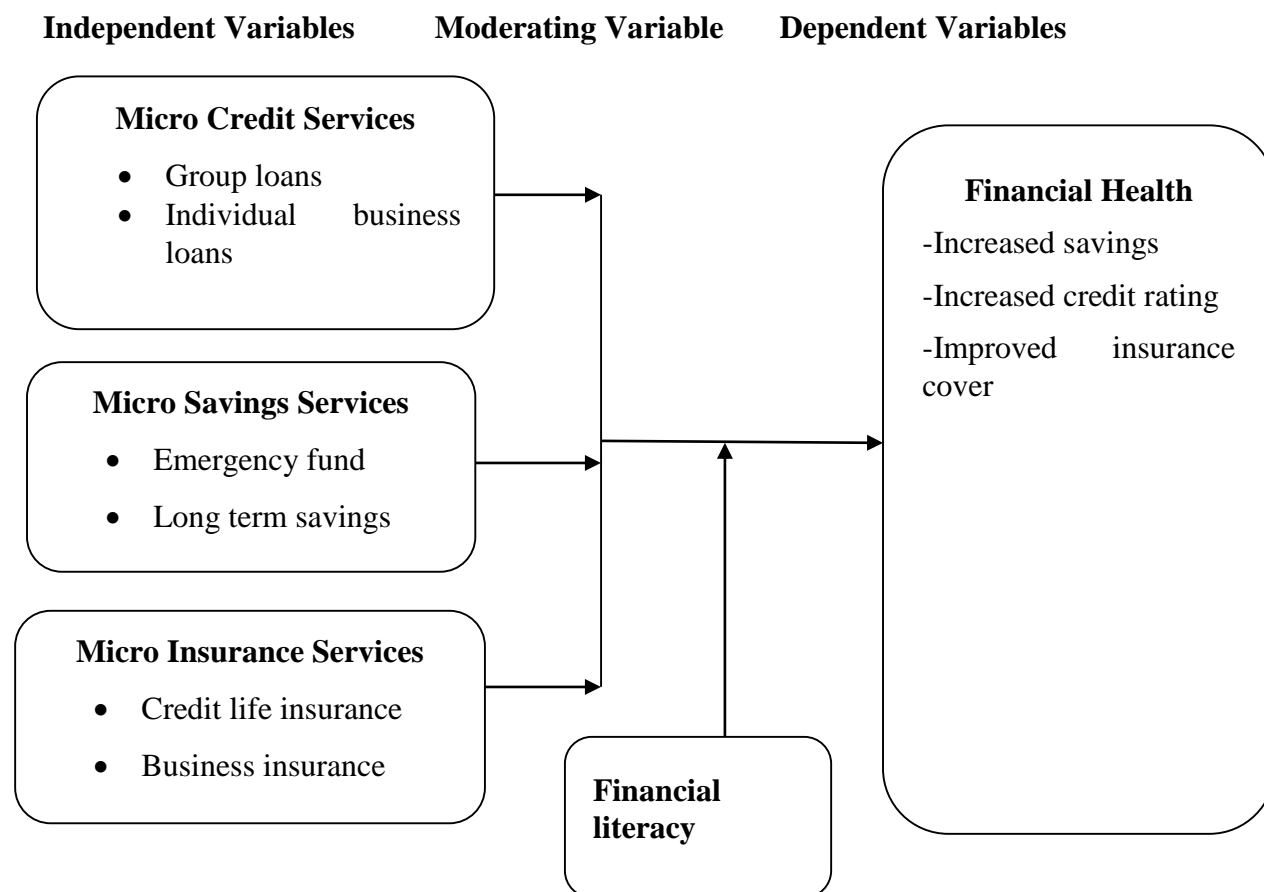


Figure 1: Conceptual Model

3.0 Research Methodology

The study employed the 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. The study used an explanatory research strategy, which included collecting quantitative data to ascertain the impact of independent factors on the dependent variable, utilizing a descriptive design for understanding the relationship between study variables (Khan, 2018). 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 sample size was 384 respondents (Khan, 2018). 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

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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. This study obtained primary data from the sampled respondents using a structured questionnaire

4.0 Research Findings and Discussion

The study findings are presented per objective and in sections.

4.1 Correlation analysis

In order to investigate the nature of the connection that exists between two variables, a correlation analysis was carried out. A correlation coefficient that is negative and a correlation coefficient that is positive suggest, respectively, a negative and a positive correlation. For the purpose of determining whether or not there is a connection between the independent variables under investigation and the state of the economy, the pearson correlation test was used. For the purpose of determining the degree of link that exists between the variables, correlation was used. In Table 1, the relationships are shown.

Table 1: Correlation Matrix

	FH	MCS	MSS	MIS	FL
FH	1				
MCS	0.773	1			
MSS	0.463	0.316	1		
MIS	0.618	0.163	0.216	1	
FL	0.652	0.161	0.233	0.462	1

Source: Research Data (2024)

The research utilized Pearson correlation analysis to examine the relationships between micro-credit services, micro-saving services, micro-insurance services, financial literacy, and financial wellness among female members of selected microfinance banks in Kenya. The findings revealed a substantial positive association between micro-credit services and financial health ($R^2 = 0.773$), indicating that increased micro-credit services improve financial health. Additionally, a significant positive correlation was found between micro-saving services and financial health ($r = 0.463$), suggesting that expanding these services enhances financial wellness. Micro-insurance services also showed a positive relationship with financial health ($r = 0.618$), and financial literacy was significantly correlated with better financial health ($r = 0.652$). These results underscore the importance of these financial services and literacy in enhancing the financial well-being of women in Kenya.

4.2 Regression Analysis

The multiple regression model was used to determine the association between financial inclusion and the financial health of women who were members of selected 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 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.804053	0.64727	0.616543	1.035581

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 0.647, which indicates that the chosen predictor variables explain 64.7% 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 0.804 indicates that the predictor factors and the response variable have a statistically significant connection, as shown by the findings of the research.

Table 3: ANOVA of the Regression

	Sum of Squares	df	Mean Square	F	Sig.
Regression	74.136	3	24.712	21.580	0.000002
Residual	380.17	332	1.1451		
Total	454.306	336			

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

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

Source: Research Data (2024)

Results of the analysis of variance are shown in Table 3. 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 an F statistic of 21.580, 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: Coefficient of Regression

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.936	0.765		5.145	0.0000
Micro-credit services	0.741	0.236	0.646	3.140	0.0032
Micro-saving services	0.667	0.215	0.526	3.102	0.0035
Micro-insurance services	0.737	0.123	0.645	5.992	0.0000

Source: Research Data (2024)

Financial health among women members of selected microfinance banks in Kenya = $3.936 + 0.741X_1 + 0.667X_2 + 0.737X_3 + \varepsilon$

The findings presented in Table 4 demonstrate the statistical significance of the predictor variables in the study model, including t-ratios, standard error, and estimates of the independent variables. The regression model indicates that, assuming all other variables are zero, the financial well-being of women in Kenya who are members of selected microfinance banks is 3.936. The provision of micro-credit services significantly improves financial health ($\beta = 0.741$, $p = 0.0032$), indicating that an increase in micro-credit services leads to a 0.741-unit improvement in financial health. Similarly, micro-saving services have a significant positive impact on financial health ($\beta = 0.667$, $p = 0.0035$), suggesting that increased micro-saving services enhance financial health by 0.667 units. Additionally, micro-insurance services also positively influence financial health ($\beta = 0.667$, $p = 0.0035$), indicating a 0.667-unit improvement with increased micro-insurance services. These results underscore the critical role of these financial services in enhancing the financial well-being of women in Kenya's microfinance banks.

4.3 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

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

Mode 1	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 6: 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 6 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 7: Beta Coefficients

Model			Unstandardized	Standardize	T-value	Sig.
			Coefficients	d		
			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
	(Constant)		.759		.136	.893
3	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.

4.4 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.

4.5 Discussion of Findings

4.5.1 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

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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.

4.5.2 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.

4.5.3 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

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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).

4.5.4 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.

5.0 Summary of Findings

The study revealed that women members of selected microfinance banks in Kenya have accessed micro-credit, micro-saving, and micro-insurance services. Most respondents received micro-credit amounts between 201,000-300,000 KES with repayment periods of 1-2 years, finding the interest rates favorable, often using the credit for school fees. Women also accessed micro-saving services, maintained normal operating accounts, and improved their borrowing capacity due to micro-savings. Furthermore, women advanced micro-insurance products, primarily for medical insurance, effectively managed risks, made claims, and expressed satisfaction with these services, recommending them to others. The study rejected the null hypothesis, concluding that financial literacy moderates the relationship between microfinance services and financial health. Additionally, it was established that women received training and advisory services, which improved their financial management.

6.0 Conclusion

The study concludes that the provision of micro-credit services makes a positive and significant contribution to the financial health of women who are members of selected microfinance banks in Kenya. The research confirms that micro-credit services substantially improve the financial health of these women.

Further, the study concludes that micro-saving services have a significant and positive impact on the financial health of women who are members of selected microfinance banks in Kenya. The use of micro-saving services contributes positively and significantly to their financial well-being.

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Additionally, the study concludes that micro-insurance services have a significant and positive relationship with the financial health of women who are members of selected microfinance banks in Kenya.

Finally, the study concludes that financial literacy significantly and positively moderates the relationship between microfinance services and the financial health of women members of selected microfinance banks in Kenya. The presence of financial literacy enhances the positive impact of microfinance services on the financial health of these women.

7.0 Recommendations

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.

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