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Abstract

This study examined the impact of microfinance lending on women empowerment in Nakuru County informal settlements, Kenya, focusing on four microfinance service components: institutional lending services, saving services, microinsurance services, and financial training. The study adopted a descriptive survey design targeting women aged 18-60 years residing in informal settlements who were current or potential beneficiaries of microfinance services. From a target population of 400 women, a sample of 200 respondents was selected using purposive sampling, achieving a 93.0% response rate with 186 completed questionnaires. Data was collected using structured questionnaires with a 5-point Likert scale and analyzed using descriptive and inferential statistics including Pearson correlation and multiple regression analysis. The results revealed that all microfinance services had significant positive relationships with women empowerment, with lending services showing the strongest correlation ($r = 0.779$), followed by saving services ($r = 0.776$), microinsurance services ($r = 0.768$), and financial training ($r = 0.732$). The regression model demonstrated substantial explanatory power ($R^2 = 0.723$, $F = 118.033$, $p < 0.05$), with lending services being the strongest predictor of women empowerment ($\beta = 0.275$), followed by saving services ($\beta = 0.245$), microinsurance services ($\beta = 0.244$), and financial training ($\beta = 0.180$). The study concluded that microfinance services significantly contribute to women empowerment, though challenges exist regarding affordability and accessibility, recommending that microfinance institutions redesign products, strengthen financial literacy programs, improve microinsurance awareness, and expand training availability.

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1.0 Introduction

Women living in urban informal settlements face persistent barriers to economic empowerment, with limited access to formal financial services constraining their ability to improve their livelihoods and achieve financial independence. These women encounter compounded socio-economic challenges including unemployment, insecure housing, low education levels, and exclusion from mainstream banking systems (Mugwara, 2020). Only a small percentage of households can be reached by major commercial banks due to high minimum deposit requirements and lending fees, forcing women to rely on inadequate alternatives (Steel & Andah, 2018). Microfinance institutions have emerged as potential solutions by providing specialized financial services including small loans, savings programs, insurance products, and financial training specifically designed for marginalized populations (Cheston & Kuhn, 2019). However, unrealized objectives hinder the fulfillment of microfinance vision because MFIs and their female clients encounter numerous operational and structural barriers (Zinman, 2020).

The effectiveness of microfinance interventions in truly empowering women across economic, social, and psychological dimensions remains inadequately understood, particularly within urban informal settlement contexts where traditional development approaches often fall short of achieving sustainable empowerment outcomes (Mayoux, 2023). Despite the widespread promotion of microfinance as a tool for poverty alleviation, interest rates for microloans in Kenya exceed 70% APR, making borrowing costs prohibitively expensive for low-income women who need capital for income-generating activities (FinDev Gateway, 2024). Only seven percent of women-owned micro, small and medium enterprises in Kenya have formal access to finance, causing these businesses to struggle with growth and survival (IFC, 2024). Women form more than 56% of the 1.4 billion unbanked adults globally, with women in informal settlement areas being disproportionately affected by financial exclusion (World Bank, 2022).

Globally, the experience with microfinance and women's empowerment reveals mixed but generally positive outcomes across diverse contexts. At the Grameen Bank, the world's largest microfinance institution, more than 90% of loan clients are women, with evidence showing that a loan in the hands of a woman has a better chance to change not just her life, but to improve her children's opportunities and society's prosperity (Asia Society, 2017). In Sub-Saharan Africa, over 3,000 MFIs operate across the continent, with the total value of microloans reaching approximately USD 8 billion, representing a significant increase from USD 4.5 billion in 2019 (African Leadership Magazine, 2024). Women constitute over 70% of microfinance clients in Africa, with their participation leading to a 25% increase in household incomes and improved access to education and healthcare (African Leadership Magazine, 2024). Kenya's GDP growth is projected at 4.7% in 2024, with women's economic empowerment emphasized as essential for easing the country's socioeconomic pressures (World Bank, 2024).

1.2 Statement of the Problem

Despite the widespread promotion of microfinance as a tool for poverty alleviation and women empowerment, women in informal settlements continue to struggle with limited access to appropriate financial resources, unstable livelihoods, and lack of decision-making power within households and communities. According to FSD Kenya (2021), 46% of women living in urban informal settlements remain outside the formal financial sector, facing constrained economic possibilities and heightened gender inequalities. Interest rates for microloans in Kenya exceed 70% APR, making borrowing costs prohibitively expensive for low-income women who need capital for income-generating activities (FinDev Gateway, 2024). The World Bank (2022) reports that females form more than 56% of the 1.4 billion unbanked adults

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globally, with women in informal settlement areas being disproportionately affected by financial exclusion. In Kenya, only seven percent of women-owned micro, small and medium enterprises have formal access to finance, causing these businesses to struggle with growth and survival (IFC, 2024). A group of banking procedures known as microfinance are designed to accept small deposits and offer small loans, usually without security, yet access remains limited (Cheston & Kuhn, 2019). Only around 5% of households can be reached by major commercial banks due to high minimum deposit requirements and lending fees, forcing women to rely on inadequate alternatives (Steel & Andah, 2018).

This financial exclusion perpetuates cycles of poverty and reinforces gender inequalities, limiting women's ability to achieve economic independence and social empowerment. Unrealized objectives hinder the fulfillment of microfinance vision because MFIs and their female clients in informal settlement areas encounter numerous operational and structural barriers (Zinman, 2020). Women in informal settlement areas face compounded socio-economic barriers including unemployment, insecure housing, low education levels, and exclusion from mainstream banking, which traditional microfinance models fail to adequately address (Mugwara, 2020). Women become less vulnerable to poverty if they receive financial support through microfinance to engage in income-generating activities, yet current delivery mechanisms are insufficient (Cheston & Kuhn, 2022). The high cost of borrowing and inappropriate financial products force women to rely on informal financial systems or remain without access to capital needed for business development (Robert et al., 2019). Microfinance empowerment has improved its support system for the impoverished community, but gaps persist in reaching the most marginalized women (Yunus, 2020). This situation undermines women's potential to contribute meaningfully to household welfare, participate in community decision-making, and achieve the multi-dimensional empowerment that microfinance programs theoretically promise (Kabeer, 2019).

1.3 Objective of the Study

The main objective of the study was to examine the impact of microfinance lending and women empowerment in Nakuru County informal settlements in Kenya.

The specific objectives were to;

i. To evaluate the role of institutional lending services on the financial empowerment of women residing in the informal settlements of Nakuru County.
ii. To assess how institutional saving services influence the financial empowerment of women in the informal settlements of Nakuru County.
iii. To examine how institutional microinsurance services contribute to the financial empowerment of women in the informal settlements of Nakuru County.
iv. To investigate the role of institutional financial training in enhancing the financial empowerment of women in the informal settlements of Nakuru County.

1.4 Research Questions

i. In what ways do institutional lending services influence the financial empowerment of women in the informal settlements of Nakuru County?

ii. To what degree do institutional saving services contribute to the financial empowerment of women in the informal settlements of Nakuru County?

iii. How do institutional microinsurance services impact the financial empowerment of women in the informal settlements of Nakuru County?

iv. What role does institutional financial training play in promoting the financial empowerment of women in the informal settlements of Nakuru County?

2.0 Literature Review

2.1 Theoretical Literature Review

Empowerment Theory

Empowerment Theory, developed by Julian Rappaport in 1981, emphasizes enabling individuals and groups to gain control over their lives, fostering a sense of agency and participation in decision-making processes. This theory is intricately linked to institutions providing financial training and promoting financial empowerment for women by equipping women with skills, knowledge and access to financial resources, helping reduce systemic barriers and enhance their autonomy in economic and social spheres (Rappaport, 1981). The theory considers empowerment as a multi-dimensional construct encompassing access to resources, agency, and achievements, where in the context of microfinance, access to financial services enhances women's ability to participate in economic activities, make household decisions, and assert autonomy (Kabeer, 1999). Empowerment is a transformative journey in human life, moving from a state of helplessness to gaining significant control over one's existence, involving taking charge of one's destiny and leveraging the surrounding environment to achieve sustainable improvements in living standards and overall well-being (Bandura, 2015). One key perspective defines empowerment as self-efficacy, the belief of individuals, particularly within table-banking groups, in their abilities and unique personal traits, fostering self-confidence that enables them to take initiative, transform their lives and shape the future they envision (World Bank, 2007). Critics of empowerment theory contend that while it presents an ideal alternative development model through its bottom-up approaches, it faces challenges in assessing its outcomes, as evaluators may lack the tools to identify what truly constitutes significant findings or how to achieve them without genuine collaboration with the group being evaluated (Bandura, 2015).

Social Capital Theory

Social Capital Theory, initially popularized by Pierre Bourdieu in the early 1980s and further developed by Robert Putnam in the 1990s, emphasizes the importance of social networks, trust and norms in fostering collective action and social cohesion. Putnam's seminal work *Bowling Alone* (2000) highlighted the decline of social capital in modern societies, stressing its role in economic development and community well-being, suggesting that robust social networks provide individuals with resources, support and opportunities, ultimately driving both individual and societal progress (Putnam, 1995). Social capital theory posits that networks, trust, and social norms enable collective action and mutual support, where group lending methodologies commonly used in microfinance programs build on this concept by relying on peer monitoring and social cohesion to ensure repayment. Social Capital Theory is highly relevant to institutions offering savings services, particularly in initiatives targeting women, as such institutions often rely on group-based models like self-help groups (SHGs) or microfinance networks, where trust and collective accountability enable women to save, access credit and build financial resilience (Kabeer, 2005). By fostering trust and social connections, these programs empower women economically and socially, leading to improved decision-making power in households and communities. However, a significant weakness of Social Capital Theory lies in its potential oversimplification of social dynamics, as it assumes that social networks are inherently positive and beneficial, while critics argue that not all forms of social capital are inclusive, as exclusive or tightly knit groups may reinforce inequalities or hinder broader community integration (Portes, 1998).

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Classical Feminist Theory

Classical Feminist Theory, primarily advanced by Ackerly (1995), emphasizes economic independence for women as a key pathway to achieving gender equality, arguing that women's liberation necessitates feminist involvement in the broader struggle against capitalism. The theory posits that in traditional communal systems of production, particularly those with matrilineal family structures, women were inherently equal to or even more influential than men, but men's control over private property and the ability to generate surplus transformed families into patriarchal structures, where women were regarded as the property of their fathers and husbands. The rise of capitalism, which separated household activities from commodity production, reinforced male dominance within the family, establishing a dynamic where women became economically dependent on men, solidifying the male breadwinner and female housewife roles within the nuclear family structure. A key weakness of classical feminist theory is its historical focus on the experiences of middle- and upper-class white women, often neglecting intersectionality, meaning it failed to account for the compounding effects of race, class and other social identities on gender inequality, limiting its applicability to women from diverse backgrounds (Crenshaw, 1989). In modern times, classical feminist principles resonate in the empowerment of women through institutional saving services, which provide access to financial resources, independence and security, as microfinance institutions, inspired by feminist ideals, prioritize women as clients, fostering their economic empowerment and household decision-making (Kabeer, 2001). These services enhance women's ability to break the cycle of poverty and contribute to community development, aligning with the classical feminist emphasis on gender equity in socioeconomic spheres.

Financial Intermediation Theory

Financial Intermediation Theory suggests that institutions like banks and microfinance providers exist to mitigate transaction costs, manage risk, and facilitate access to capital, where for the urban poor, particularly women in informal settlements, microfinance serves as a key financial intermediary where traditional banking services are unavailable or inaccessible (Diamond, 1984). The theory was developed by Douglas W. Diamond (1984), who argued that financial intermediaries like banks and MFIs exist because they perform the role of bridging the gap between savers and borrowers more efficiently than direct market exchanges, particularly useful when information is incomplete or when potential borrowers lack collateral or credit history. The financial intermediation theory rests on four key assumptions: first, MFIs help address information asymmetry by screening and monitoring borrowers who know more about their repayment capacity than lenders; second, they reduce transaction costs that individuals, especially low-income women, would face when trying to access financial services independently; third, MFIs diversify risk by pooling funds from many clients and lending across different sectors; and lastly, they perform liquidity transformation by converting short-term deposits into long-term loans, thereby enabling women to access capital for income-generating activities despite limited financial assets. In the context of microfinance lending and women empowerment, the Financial Intermediation theory explains the role of MFIs in enabling women, especially those in informal urban settlements like Nakuru County informal settlements, to access credit and other financial services that they otherwise would not obtain from conventional banks due to lack of formal employment or collateral, low or irregular income, or limited financial literacy. This intermediation process helps women invest in small businesses, smooth consumption, manage risks, and improve household welfare, thereby contributing to their economic and psychological empowerment, while the theory complements Empowerment Theory by explaining the mechanism through which empowerment becomes possible, namely access to financial capital and services.

2.2 Empirical Literature Review

Microfinance and Women Empowerment

Adero and Kariuki (2020) conducted a study examining the effect of microfinance interventions on financial empowerment of women in Mombasa County, Kenya, employing a descriptive survey design with a sample of 384 women beneficiaries from various microfinance institutions. Using structured questionnaires and statistical analysis through SPSS, the study found that microfinance services significantly improved women's access to credit and savings opportunities, leading to enhanced business development and household income stability, with findings revealing that 78% of women participants experienced increased decision-making power within households and greater participation in community economic activities. However, the study identified gaps in understanding the long-term sustainability of empowerment outcomes and recommended further research on the role of financial literacy training in maximizing microfinance benefits for women in informal settlements. Karuga and Jagongo (2020) investigated the effect of microfinance on rural women empowerment in Kikuyu constituency, Kiambu County, using a descriptive research design with a target population of 2,400 women from self-help groups. The study utilized stratified random sampling to select 240 respondents and employed both primary and secondary data collection methods, with analysis using correlation and regression techniques demonstrating that access to microfinance services positively influenced women's economic status through improved income generation and asset accumulation, with research findings indicating that microfinance participation enabled 65% of women to diversify their income sources and build financial resilience against economic shocks.

Lending Services and Women Empowerment

Cooke and Amuakwa-Mensah (2022) conducted a case study examining microfinance loans and women's economic empowerment using data from Baobab Microfinance Company, employing a quasi-experimental design with a sample of 1,200 women borrowers, utilizing both treatment and control groups to assess impact. Through propensity score matching and difference-in-differences analysis, the study found that access to microfinance loans significantly increased women's income by 23% and improved their business asset ownership by 18% over a two-year period, with findings revealing that 67% of women experienced enhanced decision-making power within households and 54% reported improved social status in their communities. Wellalage and Thrikawala (2021) investigated bank credit, microfinance, and female ownership, examining whether women are more disadvantaged than men in accessing financial services, employing a comprehensive dataset from multiple countries using regression analysis and logistic models with a sample of 15,000 firms. Their methodology included controlling for firm characteristics, institutional factors, and country-specific variables, with research findings demonstrating that women-owned enterprises face 12% higher rejection rates for formal bank credit compared to male-owned businesses, but microfinance institutions show more gender-inclusive lending practices, with the study revealing that 48% of women relied on microfinance due to exclusion from formal banking, with microfinance loans leading to 15% average increase in business performance.

Saving Services and Microinsurance Services

Bansal and Singh (2020) examined the social and entrepreneurial development of women through microfinance in the Indian context, focusing specifically on savings mobilization and its impact on empowerment, employing a mixed-methods approach with 450 women participants from urban informal settlements in Delhi, using structured questionnaires and in-depth interviews. Through descriptive statistics and structural equation modeling, the research found that access to institutional savings services increased women's financial security by 34% and enhanced their entrepreneurial activities by 28%, with findings revealing that 72% of women who participated in group savings schemes reported improved household financial management and 65% demonstrated increased business investment capacity. Chandrarathna and Sumanasiri (2021) investigated micro-finance as a triggering mechanism for empowering women's entrepreneurship in Sri Lanka, with particular emphasis on savings services, utilizing a cross-sectional survey design with 320 women beneficiaries from microfinance institutions, employing stratified random sampling and analyzing data through SPSS using correlation and regression analysis. The study found that regular savings services significantly contributed to women's financial empowerment, with 68% of participants reporting increased confidence in financial decision-making and 59% showing improved asset accumulation, while findings indicated that women who maintained consistent savings for over 18 months demonstrated 25% higher business growth rates compared to irregular savers.

Financial Training and Women Empowerment

Lamichhane (2020) conducted a comprehensive review of best practices in microfinance for women empowerment, with particular emphasis on financial training components, employing a systematic literature review methodology, analyzing 67 empirical studies from South Asian countries and using meta-analysis techniques to synthesize findings. The research found that women who received structured financial training alongside microfinance services demonstrated 35% higher business success rates and 42% better loan repayment performance compared to those receiving credit alone, with findings revealing that 79% of women who participated in financial literacy programs reported increased confidence in financial decision-making and 68% showed improved household budget management. Maganga (2021) examined the impact of microfinance village savings and loan associations on women's empowerment and resilience in Malawi, incorporating analysis of financial education components, using a mixed-methods approach with 384 women from 32 village savings groups, employing pre-post intervention design with control groups and analyzing data through difference-in-differences methodology. The study found that women who received comprehensive financial training showed 47% improvement in savings behavior and 33% increase in diversified income sources over an 18-month period, with findings indicating that 73% of trained women demonstrated enhanced financial planning skills and 61% reported improved ability to manage business risks.

2.4 Conceptual Framework

The conceptual framework for this study is based on the hypothesis that microfinance lending (independent variable) influences women empowerment (dependent variable).

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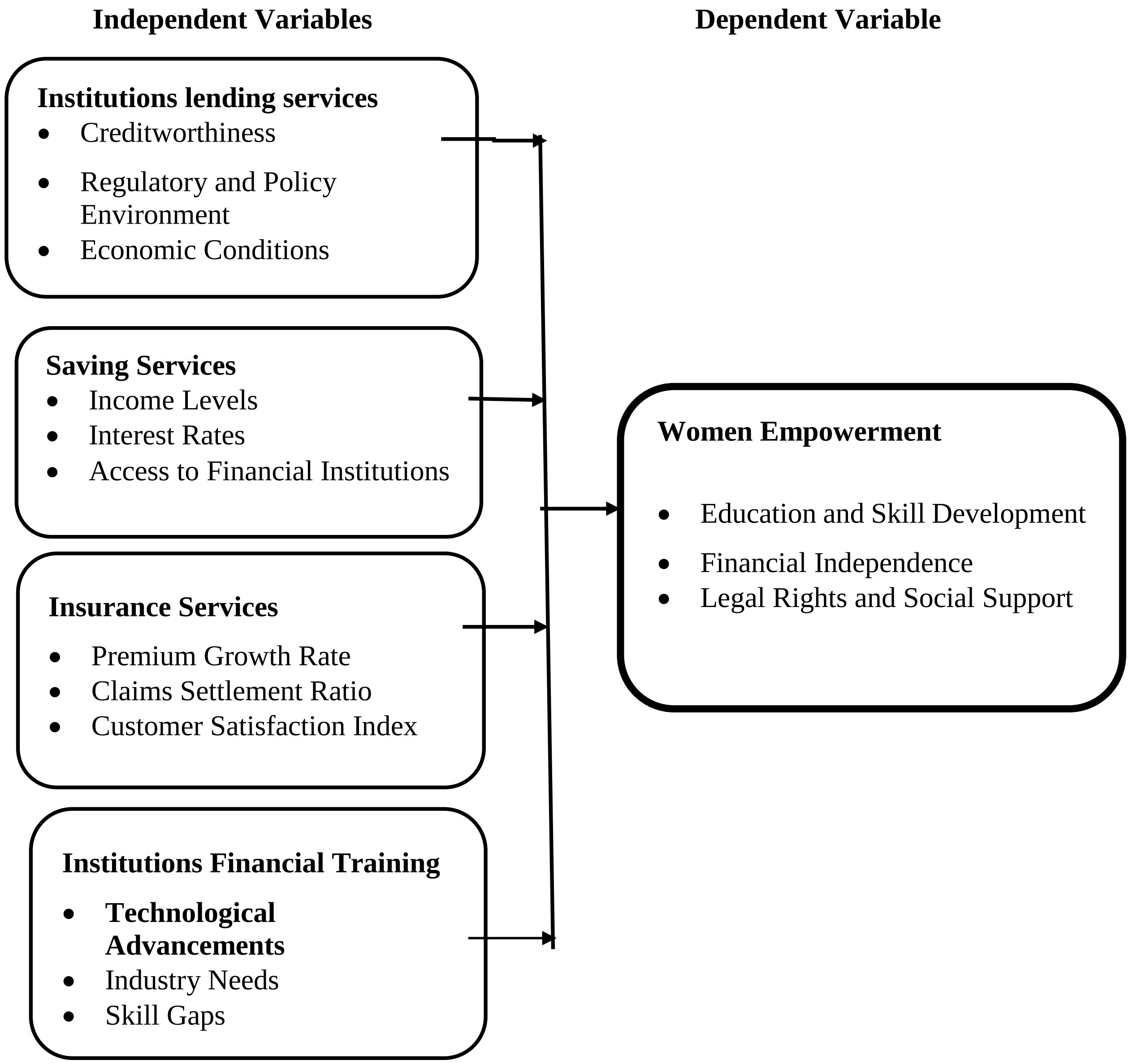

Figure 1: Conceptual Framework

3.0 Research Design and Methodology

This study adopted a descriptive survey design to examine the influence of microfinance lending on women empowerment in Nakuru County informal settlements. The descriptive survey design was deemed appropriate because it allows for systematic collection and analysis of data that describes the current status and relationships between microfinance services and women's empowerment indicators (Mugenda & Mugenda, 2013). This design enabled the researcher to gather comprehensive information from women beneficiaries of microfinance services and analyze how these services affect various dimensions of empowerment, including economic independence, social participation, and psychological well-being. Descriptive survey designs are particularly suitable for examining existing conditions and relationships without manipulation of variables, making it appropriate for understanding the real-world impact of microfinance interventions on women's lives (Saunders, 2012). The target population consisted of women residing in selected informal settlement areas of Nakuru County who are beneficiaries of microfinance institutions, specifically focusing on women who have accessed microfinance services such as microloans, group lending, and savings programs. Women in the age range of economic activity, typically 18-60 years old, were selected from microfinance institutions and women in Kivumbini informal settlements of Nakuru, with a target size of 400 participants considered practical and sufficient for qualitative and quantitative analysis.

The study employed purposive sampling to select 200 respondents in Nakuru informal settlements using Yamane (1967) formula, with the sample including women from diverse age groups, educational backgrounds, and economic activities to capture a comprehensive understanding of microfinance's impact on women empowerment. The study utilized structured questionnaires with closed-ended questions as the primary data collection instrument, designed to capture comprehensive information on microfinance services and women's empowerment indicators, with the questionnaire consisting of six main sections: demographic characteristics of respondents, institutional lending services, institutional saving services, institutional micro insurance services, institutional financial training, and women empowerment indicators. The instrument employed a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) for measuring attitudes and perceptions regarding microfinance services and empowerment outcomes, as this scale provides adequate response variability while being easily understood by respondents (Kothari, 2011). Data processing and analysis involved systematic procedures to transform collected data into meaningful information for addressing the research objectives, with descriptive statistics including frequencies, percentages, means, and standard deviations computed to summarize the characteristics of the sample and provide insights into the levels of microfinance service utilization and women empowerment indicators (Sekaran & Bougie, 2022). Multiple regression analysis was the primary analytical technique, supplemented by Pearson correlation analysis to assess the strength and direction of relationships between microfinance services and women empowerment, with statistical significance evaluated at the 0.05 level and all analyses conducted using the Statistical Package for Social Sciences (SPSS) Version 25.

4.0 Results and Discussion

The study achieved a response rate of 93.0%, with 186 out of 200 distributed questionnaires being completed and returned by the respondents, representing an exceptionally high response rate that significantly exceeds the generally acceptable threshold of 70% for survey research as recommended by Mugenda and Mugenda (2013).

4.1 Descriptive Statistics

The descriptive statistics revealed that lending services received an overall mean score of 3.26, with the highest rating for improved financial independence (mean = 3.55) and the lowest for affordability of interest rates (mean = 2.94), indicating moderate satisfaction among respondents. Saving services demonstrated above-average satisfaction with an overall mean score of 3.51, with the highest rating for encouraging regular saving habits (mean = 3.64) and providing security (mean = 3.63), while financial literacy programs received the lowest score (mean = 3.29). Microinsurance services recorded the lowest overall mean score of 3.17 among all microfinance components, with particular concerns about adequacy of education (mean = 2.95) and affordability of premiums (mean = 3.05), while financial security provision received relatively higher ratings (mean = 3.32). Financial training showed above-average satisfaction with an overall mean score of 3.49, with the highest rating for empowering better financial decisions (mean = 3.59) and improving confidence in handling financial matters (mean = 3.56), while availability of training programs received the lowest score (mean = 3.32). The dependent variable, women empowerment, recorded a high overall mean score of 3.70, with the contribution of financial services to overall quality of life improvement receiving the highest mean score of 3.80, followed by overall sense of empowerment (mean = 3.75), increased economic opportunities (mean = 3.72), enhanced household decision-making roles (mean = 3.63), and promotion of gender equality (mean = 3.59), indicating that the majority of respondents experienced meaningful improvements in their empowerment status through access to microfinance services.

4.2 Correlation Analysis

Correlation analysis examines the strength and direction of linear relationships between variables, providing insights into how closely the independent variables are associated with the dependent variable. The study employed Pearson product-moment correlation to assess the relationships between institutional lending services, saving services, microinsurance services, financial training, and women empowerment. The results are presented in Table 1.

Table 1: Correlation Matrix

	Empowerment of women	Lending services	Saving services	Microinsurance services	Financial training
Empowerment of women	1.00				
Lending services	.779**	1.000			
	0.000				
Saving services	.776**	0.476	1.000		
	0.000	0.140			
Microinsurance services	.768**	0.465	0.457	1.000	
	0.000	0.066	0.726		
Financial training	.732**	0.380	0.428	0.373	1.000
	0.000	0.810	0.054	0.058	

The correlation analysis reveals strong positive relationships between all microfinance service components and women empowerment. Lending services demonstrated the strongest correlation with women empowerment ($r = 0.779$, $p = 0.000 < 0.05$), indicating that women who have better access to and satisfaction with lending services tend to experience higher levels of empowerment. Saving services showed a correlation of $r = 0.776$ ($p = 0.000 < 0.05$) with women empowerment, suggesting that opportunities for secure savings and wealth accumulation are strongly associated with empowerment outcomes. Microinsurance services recorded a correlation of $r = 0.768$ ($p = 0.000 < 0.05$) with women empowerment, demonstrating that access to risk protection mechanisms significantly contributes to women's sense of empowerment and financial security. Financial training exhibited a correlation of $r = 0.732$ ($p = 0.000 < 0.05$) with women empowerment, indicating that capacity-building initiatives enhance women's empowerment levels.

The correlations between independent variables were moderate, ranging from 0.373 to 0.476, which supports the earlier multicollinearity test results showing acceptable levels of inter-correlation among predictors. The strongest inter-correlation was between lending services and saving services ($r = 0.476$), which is logical as these services are often accessed together by microfinance clients. All correlations were statistically significant at the 0.05 level, indicating robust relationships between the variables.

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4.3 Regression Analysis

Multiple regression analysis was conducted to determine the predictive power of microfinance services on women empowerment and to test the study hypotheses. The analysis examined how institutional lending services, saving services, microinsurance services, and financial training collectively and individually influence women empowerment in Nakuru County informal settlements.

Table 2: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.850	.723	.717	54.666

The model fitness results presented in Table 2 demonstrate a strong relationship between the microfinance service variables and women empowerment. The correlation coefficient (R) of 0.850 indicates a very strong positive relationship between the combined microfinance services and women empowerment. The coefficient of determination (R^2) of 0.723 reveals that 72.3% of the variance in women empowerment can be explained by the four microfinance service variables: lending services, saving services, microinsurance services, and financial training.

Table 3: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1410906.513	4	352726.628	118.033
	Residual	540896.933	181	2988.381	
	Total	1951803.446	185		

The Analysis of Variance (ANOVA) results presented in Table 3 test the overall significance of the regression model and confirm whether the microfinance service variables collectively have a statistically significant effect on women empowerment. The F-statistic of 118.033 with 4 degrees of freedom for the regression and 181 degrees of freedom for the residual indicates a very strong overall relationship between the predictor variables and the dependent variable. The significance value of 0.000 ($p < 0.05$) demonstrates that the regression model is statistically significant, meaning that at least one of the microfinance service variables significantly predicts women empowerment.

Table 4: Regression of Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	60.821	12.807		4.749	0.000
Lending services	0.231	0.059	0.275	3.920	0.000
Saving services	0.209	0.062	0.245	3.405	0.001
Microinsurance services	0.224	0.063	0.244	3.561	0.000
Financial training	0.170	0.061	0.180	2.803	0.006

The regression coefficients presented in Table 4 provide detailed insights into the individual contribution of each microfinance service variable to women empowerment. The constant term of 60.821 ($t = 4.749$, $p = 0.000 < 0.05$) represents the expected level of women empowerment

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when all microfinance service variables are zero, indicating a statistically significant baseline empowerment level.

Lending services demonstrated the strongest individual impact on women empowerment with a coefficient (B) of 0.231 ($t = 3.920$, $p = 0.000 < 0.05$). This positive and statistically significant relationship indicates that for every one-unit increase in lending services, women empowerment increases by 0.231 units, holding all other variables constant. The standardized coefficient (Beta = 0.275) suggests that lending services has the highest relative importance among all microfinance services in predicting women empowerment.

Saving services showed a positive and statistically significant relationship with women empowerment, with a coefficient of 0.209 ($t = 3.405$, $p = 0.001 < 0.05$). This indicates that a one-unit improvement in saving services leads to a 0.209-unit increase in women empowerment, controlling for other variables. The standardized coefficient (Beta = 0.245) ranks saving services as the second most important predictor of women empowerment.

Microinsurance services exhibited a positive and statistically significant relationship with women empowerment, recording a coefficient of 0.224 ($t = 3.561$, $p = 0.000 < 0.05$). This suggests that each unit increase in microinsurance services results in a 0.224-unit improvement in women empowerment, while holding other factors constant. The standardized coefficient (Beta = 0.244) indicates that microinsurance services ranks third in relative importance for predicting empowerment outcomes.

Financial training demonstrated a positive and statistically significant relationship with women empowerment, with a coefficient of 0.170 ($t = 2.803$, $p = 0.006 < 0.05$). This indicates that a one-unit increase in financial training leads to a 0.170-unit increase in women empowerment, controlling for other microfinance services. Although financial training has the smallest standardized coefficient (Beta = 0.180) among the four variables, it remains a statistically significant predictor of women empowerment at the 0.05 significance level.

4.4 Discussion of Findings

4.4.1 Institutional Lending Services On Financial Empowerment of Women

The study findings reveal that institutional lending services have a significant positive impact on women empowerment in Nakuru County informal settlements. The descriptive statistics showed an overall mean score of 3.26 for lending services, indicating moderate satisfaction among respondents, with the highest rating for improved financial independence (mean = 3.55) and the lowest for affordability of interest rates (mean = 2.94). The correlation analysis demonstrated a strong positive relationship between lending services and women empowerment ($r = 0.779$, $p = 0.000 < 0.05$), which was the strongest among all microfinance services examined. The regression analysis further confirmed this relationship, with lending services recording the highest unstandardized coefficient ($B = 0.231$, $t = 3.920$, $p = 0.000 < 0.05$) and standardized coefficient (Beta = 0.275), indicating that lending services is the most important predictor of women empowerment among the four microfinance components studied. These results suggest that despite challenges with affordability and accessibility, women who successfully access lending services experience meaningful improvements in their empowerment levels.

These findings corroborate existing literature on the role of microfinance lending in women empowerment. Cooke and Amuakwa-Mensah (2022) found that access to microfinance loans significantly increased women's income by 23% and improved business asset ownership by 18%, with 67% experiencing enhanced decision-making power within households. Similarly, Wondimu, Terefe, and Melkamu (2023) reported that 76% of women borrowers experienced increased income and 69% demonstrated enhanced savings behavior through access to lending

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services. The strong predictive power of lending services found in this study aligns with Wellalage and Thrikawala (2021), who noted that microfinance institutions show more gender-inclusive lending practices, with microfinance loans leading to 15% average increase in business performance. However, the concern about affordability identified in this study resonates with global challenges highlighted by FinDev Gateway (2024), which noted that interest rates for microloans in Kenya exceed 70% APR, making borrowing costs prohibitively expensive.

4.4.2 Institutional Saving Services On Financial Empowerment of Women

The study findings demonstrate that institutional saving services have a substantial positive impact on women empowerment in Nakuru County informal settlements. The descriptive statistics revealed an overall mean score of 3.51 for saving services, indicating above-average satisfaction among respondents, with the highest rating for encouraging regular saving habits (mean = 3.64) and providing security (mean = 3.63), while financial literacy programs received the lowest score (mean = 3.29). The correlation analysis showed a strong positive relationship between saving services and women empowerment ($r = 0.776$, $p = 0.000 < 0.05$), ranking as the second strongest correlation among all microfinance services. The regression analysis confirmed this significant relationship, with saving services recording an unstandardized coefficient of $B = 0.209$ ($t = 3.405$, $p = 0.001 < 0.05$) and a standardized coefficient of Beta = 0.245, making it the second most important predictor of women empowerment after lending services. These results indicate that saving services effectively contribute to women's financial security, goal achievement, and overall empowerment, though gaps remain in financial education support.

These findings are consistent with existing literature emphasizing the empowering role of savings services for women. Bansal and Singh (2020) found that access to institutional savings services increased women's financial security by 34% and enhanced entrepreneurial activities by 28%, with 72% of women participating in group savings schemes reporting improved household financial management. The positive impact on long-term financial goals identified in this study aligns with Chandrarathna and Sumanasiri (2021), who reported that women maintaining consistent savings for over 18 months demonstrated 25% higher business growth rates compared to irregular savers. The security aspect highlighted in the current study corroborates Ashraf, Karlan, and Yin (2020), who emphasized that owning bank accounts enhances the quality of women's financial lives by providing secure platforms for wealth preservation and future planning. The need for enhanced financial literacy programs identified in this study resonates with Akhter and Cheng (2020), who found that women participating in both savings and credit services showed 42% greater empowerment scores compared to credit-only participants.

4.4.3 Institutional Microinsurance Services On Financial Empowerment of Women

The study findings indicate that institutional microinsurance services have a significant positive impact on women empowerment in Nakuru County informal settlements, despite facing implementation challenges. The descriptive statistics showed an overall mean score of 3.17 for microinsurance services, the lowest among all microfinance components, with particular concerns about adequacy of education (mean = 2.95) and affordability of premiums (mean = 3.05), while financial security provision received relatively higher ratings (mean = 3.32). The correlation analysis revealed a strong positive relationship between microinsurance services and women empowerment ($r = 0.768$, $p = 0.000 < 0.05$), ranking third among the microfinance services examined. The regression analysis confirmed this significant relationship, with microinsurance services recording an unstandardized coefficient of $B = 0.224$ ($t = 3.561$, $p = 0.000 < 0.05$) and a standardized coefficient of Beta = 0.244, positioning it as the third most important predictor of women empowerment. These results suggest that while microinsurance services contribute meaningfully to empowerment when accessed, significant barriers exist regarding affordability, awareness, and education that limit their full potential impact.

These findings align with existing literature highlighting both the potential and challenges of microinsurance in women empowerment. Khalaf and Saqfalhait (2020) found that women accessing microinsurance services demonstrated 29% higher business continuity rates during economic crises compared to those without coverage, with 63% reporting increased confidence in business investment decisions and 58% showing reduced vulnerability to income shocks. The protective value identified in this study corroborates Khursheed (2022), who reported that women utilizing microinsurance experienced enhanced psychological empowerment, with 71% showing reduced anxiety about business risks and 67% demonstrating increased willingness to expand enterprises. The affordability concerns found in the current study resonate with the systematic review by Khursheed, Khan, and Mustafa (2021), which identified significant gaps in empirical research on microinsurance impact in informal settlement contexts, with most studies treating insurance as a secondary component rather than examining its independent contribution to empowerment. The education gap highlighted in this study supports

4.4.4 Institutional Financial Training On Financial Empowerment of Women

The study findings reveal that institutional financial training has a significant positive impact on women empowerment in Nakuru County informal settlements, demonstrating effectiveness in building both technical competencies and psychological confidence. The descriptive statistics showed an overall mean score of 3.49 for financial training, indicating above-average satisfaction among respondents, with the highest rating for empowering better financial decisions (mean = 3.59) and improving confidence in handling financial matters (mean = 3.56), while availability of training programs received the lowest score (mean = 3.32). The correlation analysis demonstrated a strong positive relationship between financial training and women empowerment ($r = 0.732$, $p = 0.000 < 0.05$), though it was the weakest among the four microfinance services examined. The regression analysis confirmed this significant relationship, with financial training recording an unstandardized coefficient of $B = 0.170$ ($t = 2.803$, $p = 0.006 < 0.05$) and a standardized coefficient of Beta = 0.180, making it the fourth most important predictor of women empowerment. These results indicate that financial training represents one of the most successful components of microfinance services in building women's capacity for financial management and enhancing their empowerment, particularly in developing both practical skills and self-efficacy.

These findings are strongly supported by existing literature emphasizing the critical role of financial education in women empowerment. Lamichhane (2020) found that women receiving structured financial training alongside microfinance services demonstrated 35% higher business success rates and 42% better loan repayment performance, with 79% reporting increased confidence in financial decision-making and 68% showing improved household budget management. The empowerment impact identified in this study aligns with Maganga (2021), who reported that women receiving comprehensive financial training showed 47% improvement in savings behavior and 33% increase in diversified income sources, with 73% demonstrating enhanced financial planning skills and 61% reporting improved ability to manage business risks. The confidence-building aspect highlighted in the current study corroborates Malela (2022), who found that 82% of women completing financial literacy courses demonstrated improved understanding of interest rates and loan terms, while 69% showed enhanced entrepreneurial skills.

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5.0 Conclusions

The study concludes that institutional lending services are the most critical component of microfinance in empowering women in Nakuru County informal settlements, serving as the primary driver of financial independence and economic opportunities. While these services demonstrate the strongest impact on empowerment outcomes, their effectiveness is significantly constrained by affordability issues and accessibility barriers that need urgent attention from policymakers and microfinance institutions.

The study concludes that institutional saving services play a vital role in building women's financial resilience and security, effectively promoting disciplined saving habits and long-term financial planning. These services successfully establish trust and confidence among women users, though their empowerment potential could be significantly enhanced through improved financial literacy programs that help women optimize their savings strategies.

The study concludes that institutional microinsurance services, while valuable for empowerment, represent the weakest link in the microfinance ecosystem due to implementation challenges. Despite their potential to provide crucial risk protection and financial security, these services fail to reach their full empowerment impact due to affordability constraints and inadequate awareness creation among target beneficiaries.

The study concludes that institutional financial training emerges as a highly effective empowerment tool that builds both technical competencies and psychological confidence among women participants. These programs successfully enhance women's financial decision-making capabilities and self-efficacy, though their impact could be amplified through improved availability and accessibility across all informal settlement areas in the county.

6.0 Recommendations

The study recommends that microfinance institutions should redesign their lending products to address affordability concerns by developing flexible interest rate structures and exploring alternative collateral mechanisms that reduce borrowing costs for women in informal settlements. Policymakers should establish regulatory frameworks that cap interest rates for microfinance lending and provide subsidies or guarantees to institutions serving low-income women, while institutions should simplify application processes and establish mobile lending units to improve accessibility in informal settlements.

The study recommends that microfinance institutions should strengthen their financial literacy programs as integral components of their saving services, providing comprehensive training on savings optimization, investment planning, and financial goal setting. Institutions should develop innovative savings products tailored to the irregular income patterns of women in informal settlements, including flexible deposit schedules and automated savings mechanisms that accommodate the unique financial circumstances of informal sector workers.

The study recommends that microfinance institutions should redesign their microinsurance products to improve affordability through subsidized premiums, group insurance schemes, and flexible payment options that align with women's income flows. Institutions should invest significantly in awareness creation and education campaigns that clearly communicate the benefits and value of insurance services, while developing simplified insurance products that are easy to understand and relevant to the specific risks faced by women in informal settlement environments.

The study recommends that microfinance institutions should expand the availability of financial training programs by establishing community-based training centers and partnering with local organizations to reach more women in informal settlements. Institutions should integrate digital literacy and mobile financial services training into their curricula to prepare women for the evolving financial landscape, while governments should support these initiatives through funding and policy frameworks that recognize financial education as essential for women's economic empowerment.

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