

**MICROFINANCE LENDING AND WOMEN EMPOWERMENT IN NAKURU
COUNTY INFORMAL SETTLEMENT IN KENYA**

BY

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**MASTER OF SCIENCE IN COMMERCE
FINANCE AND INVESTMENTS**

KCA UNIVERSITY

2025

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15/01605

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN COMMERCE
FINANCE AND INVESTMENTS OPTION IN THE SCHOOL OF BUSINESS AT KCA
UNIVERSITY**

AUGUST 2025

DECLARATION

I declare that the work in this dissertation has not been previously published or submitted elsewhere for award of a degree. I also declare that this my own original work and contains no material written of published by other people except where due reference is made and author duly acknowledged.

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ABSTRACT

This study explored the effect of microfinance lending on women empowerment in the slums of Nakuru County, Kenya. The focus was on four microfinance service components: institutional lending services, saving services, micro insurance services, and financial training, and their relationship to economic, social, and psychological dimensions of women's empowerment. The study adopted a descriptive survey design targeting women aged 18-60 years residing in selected slum areas of Nakuru County who were current or potential beneficiaries of microfinance services. From a target population of 400 women, a sample of 200 respondents was selected using simple random sampling from Kivumbini slums of Nakuru, achieving a high response rate with completed questionnaires. Data was collected using structured questionnaires with closed-ended questions employing a 5-point Likert scale. The questionnaire consisted of six sections covering demographic characteristics and the five study variables. Data analysis involved both descriptive and inferential statistics, with descriptive statistics including frequencies, percentages, means, and standard deviations to summarize respondent characteristics and variable distributions. Inferential statistics employed Pearson correlation analysis to examine relationships between variables and multiple regression analysis to determine the predictive power of institutional lending services, saving services, micro insurance services, and financial training on women empowerment. Diagnostic tests including multicollinearity, heteroscedasticity, and normality tests were conducted to ensure data met regression assumptions. 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 ($\beta = 0.275$, $t = 3.920$, $p < 0.05$), followed by saving services ($\beta = 0.245$, $t = 3.405$, $p < 0.05$), microinsurance services ($\beta = 0.244$, $t = 3.561$, $p < 0.05$), and financial training ($\beta = 0.180$, $t = 2.803$, $p < 0.05$) respectively. The study concluded that microfinance services significantly contribute to women empowerment, though challenges exist regarding affordability and accessibility. The study recommended that microfinance institutions should redesign products to address affordability concerns, strengthen financial literacy programs, improve microinsurance awareness, and expand training availability. The findings provided evidence-based insights for policymakers, microfinance institutions, and development practitioners on optimizing microfinance services to enhance women's empowerment in urban slum contexts.

ACKNOWLEDGEMENT

First and foremost, I wish to express my heartfelt gratitude to the Almighty God for His unwavering support in every aspect of my life, financially, mentally, physically, emotionally and spiritually throughout the course of this research. His love has been my greatest strength and His protection has been constant throughout my educational journey. I am also deeply thankful to my supervisor, Dr. Mary Mwanzia, for her invaluable guidance, support and patience throughout my study. Furthermore, I extend my sincere appreciation to KCA University for providing a dedicated and hardworking staff, along with a conducive learning environment that greatly facilitated my academic growth.

A big appreciation goes to the respondents who took their time to respond to my questionnaires. Despite their busy schedules they still found time and responded to the questionnaires with lots of trust and honesty.

I also wish to thank my family for all the support they granted me during this period when I needed each one of them most. My thanks also go to my parents for their support and advice. Last but not least, many thanks to my extremely supportive friends.

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DEDICATION

I dedicate my research study to my husband Noel Tayiai and our lovely children Tumelei, Lesiamon, Mayiani and Mutunkei for being so patient and supportive through this journey. To friends who have tirelessly, unreservedly invested and have always looked forward to my success in every day of my life. God bless them all.

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LIST OF ABBREVIATION

| | |
|--------------|---|
| MFI s | Microfinance institutions |
| REPOA | Research on Poverty Alleviation Programme |
| RPL | Recognition of Prior Learning |
| TVET | Technical and Vocational Education and Training |
| WEF | Women Enterprise Fund |

DEFINITION OF TERMS

Microfinance: Financial services, including credit, savings, and insurance, provided to low-income individuals who lack access to traditional banking (Cheston & Kuhn, 2019).

Empowerment: The process through which individuals gain control over personal and economic decisions and resources (Page & Czuba, 2019).

Economic Empowerment: The ability to earn income, manage finances, and contribute to household expenditures (Kabeer, 2019).

Social Empowerment: Participation in community life and decision-making processes (Afrin, 2018).

Psychological Empowerment: Increased self-esteem, confidence, and belief in one's abilities (Bandura, 2015).

Slums: Informal urban settlements characterized by poverty, inadequate housing, poor sanitation, and lack of basic services (UN-Habitat, 2020).

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Chapter one is the foundational chapter of the study from which stems the background of the study. The background presents different perspectives of the study globally, regionally and locally. The chapter also present the statement of the problem, the objectives of the study, the research questions, justification and the significance of the study and the scope of the study.

1.1 Background of the Study

Women living in urban slums 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). According to Steel and Andah (2018), 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. 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, Zinman (2020) argues that unrealized objectives hinder the fulfillment of microfinance vision because MFIs and their female clients encounter numerous operational and structural barriers. The effectiveness of these interventions in truly empowering women across economic, social, and psychological dimensions remains inadequately understood, particularly

within urban slum contexts where traditional development approaches often fall short of achieving sustainable empowerment outcomes (Mayoux, 2023).

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 South Asia, empirical studies demonstrate significant impacts, with research from Bangladesh showing significant mean differences in income, assets, and savings before and after microfinance participation among women clients (Khursheed, 2022). Banerjee et al. (2020) conducted six randomized evaluations of microcredit and found that while microfinance improved access to credit, its impact on long-term poverty reduction and women's economic empowerment was minimal. According to Yunus (2020), microfinance empowerment has improved its support system for the impoverished community by providing loan facilities and training services. However, challenges persist globally, including cultural barriers where many societies expect business undertakings to take a backseat to domestic duties, and some cultural traditions or religious practices frown on women working outside the home (Asia Society, 2017).

Regionally, the microfinance sector has demonstrated significant potential for women's empowerment while facing unique contextual challenges. As of 2024, over 3,000 MFIs operate across the African 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). According to Basu et al. (2020), microfinance institutions have evolved to address the significant gap in access to financial services across the continent, with some focusing solely on providing credit while others offer both deposit and credit services. However, Stewart et al. (2010) found little impact of microfinance on income of beneficiaries in their African study, highlighting the mixed nature of outcomes. Research from South Africa reveals that microfinance programs have reached nearly 100 million clients across Asia, Africa, and Latin America since the mid-1980s, with newly acquired business skills accompanied by improvements in self-esteem and household decision-making power (Kim et al., 2020). Sub-Saharan Africa continues to lead in mobile money adoption with 33% of adults having mobile money accounts, yet only 55% own accounts with financial institutions, and women face a 12 percentage point gender gap in account ownership (FinDev Gateway, 2024).

Locally, the microfinance sector has evolved as a critical component of financial inclusion strategies, with particular emphasis on addressing gender disparities in access to financial services. Only seven percent of women-owned micro, small and medium enterprises (MSMEs) in Kenya have formal access to finance, causing these businesses to struggle with growth and survival (IFC, 2024). Kenya's GDP growth is projected at 4.7% in 2024, with the World Bank's latest Kenya Economic Update emphasizing women's economic empowerment as essential for easing the country's socioeconomic pressures (World Bank, 2024). According to Omondi and Muturi (2020), there is ineffectiveness of one-size-fits-all financial products in addressing the unique needs of low-income women in slums, calling for tailored services and integrated approaches. Institutional frameworks supporting women's empowerment include established entities like Kenya Women

Microfinance Bank (KWFT), which focuses on reaching unbankable women in society, and government initiatives such as the Women Enterprise Fund (WEF) and Uwezo Fund mentioned in various studies (Kamau, 2020). According to UN Women (2020), slum-based microfinance programs directed at women participants lead to a 30% household income increase with sustainable livelihood development. However, interest rates for microloans in Kenya exceed 70% APR, significantly higher than rates in other regions, indicating systemic challenges in the ecosystem that require targeted interventions (FinDev Gateway, 2024).

1.1.1 Microfinance Lending

Institutional lending services represent the core function of microfinance institutions, providing small-scale credit to economically disadvantaged populations who are typically excluded from formal banking systems. These lending services typically operate through group-based methodologies that rely on social collateral rather than traditional asset-based guarantees, making credit accessible to women who lack formal collateral (Cheston & Kuhn, 2019). According to Lakwo (2017), microfinancing is viewed as a method of giving loans to women where they cannot access other formal financial services, thereby empowering them through financial sustainability. Ard and Tedeschi (2019) premise that credit constrained women always have poor access to the paid labor market, they make few decisions regarding household finances and have little power in household bargaining. The services enable women to invest in income-generating activities, support household needs, and build economic independence within their communities (Mugwara, 2020). Robert et al. (2019) note that microfinance aims to provide as many impoverished and near-poor households with ongoing access to suitable financial services, including credit transfers.

Institutional saving services provided by microfinance institutions focus on building financial resilience and promoting systematic wealth accumulation among women. These services enable structured saving mechanisms that help women overcome behavioral barriers to saving through features such as commitment devices, automated deductions, and group savings schemes (Steel & Andah, 2018). According to Kabeer (2021), owning bank accounts enhances the quality of women's financial lives by providing secure platforms for wealth preservation and future planning. Ashraf, Karlan, and Yin (2020) emphasize that owning bank accounts enhances the quality of women's financial lives. These saving services serve as foundations for future investments, emergency preparedness, and gradual asset building, contributing to long-term financial empowerment and household stability. Cheston and Kuhn (2020) argue that children's education, health and nutrition increase more when women manage the household money than when males do.

Institutional microinsurance services provide risk management tools specifically designed for low-income populations, protecting against various risks including health emergencies, agricultural losses, and business disruptions. These services enable women to pursue economic opportunities with greater confidence by mitigating potential financial setbacks that could undermine their progress (Kabeer, 2019). Microinsurance products typically cover health, crop, livestock, and business risks, serving as safety nets that prevent women from falling back into poverty when faced with unexpected expenses. According to Afrin (2018), the subject of women empowerment has gained more focus in the last few decades as a way of improving mobility, health, economic status and decision making from women. The services also function as collateral substitutes in some lending arrangements, thereby expanding access to credit for women who lack

traditional assets. Page and Czuba (2019) define empowerment as a multi-dimensional social process that helps people gain control over their own lives.

Institutional financial training services constitute essential non-financial components of microfinance institutions, focusing on building capacity and knowledge among women clients. These training programs cover financial literacy, business management, entrepreneurship skills, and market linkage strategies that enhance women's ability to effectively utilize financial services (Bandura, 2015). According to Yunus (2020), microfinance institutions provide training services among other services to improve support systems for impoverished communities. The World Bank (2007) defines empowerment as self-efficacy, the belief of individuals, particularly within table-banking groups, in their abilities and unique personal traits. The training often incorporates participatory methodologies, peer learning approaches, and practical applications that ensure knowledge retention and behavioral change, ultimately maximizing the impact of financial services on women's empowerment. Cleaver (2018) argues that education systems focus on finding alternative solutions when addressing Recognition of Prior Learning, which can be derived from both formal and non-formal education.

1.1.2 Women Empowerment in Slums

Women empowerment is a multi-dimensional social process that enables individuals to gain control over their lives, fostering agency and participation in decision-making processes across economic, social, and psychological domains. According to Page and Czuba (2019), empowerment is a multi-dimensional social process that helps people gain control over their own lives, fostering power for use in their communities and society by acting on issues they define as important. Kabeer (2019) defines women empowerment as the ability to make strategic life choices in contexts where

this ability was previously denied to them. The concept encompasses various dimensions including economic empowerment through income generation and asset ownership, social empowerment through community participation and leadership roles, and psychological empowerment through enhanced self-esteem and confidence (Afrin, 2018). Bandura (2015) describes empowerment as a transformative journey moving from helplessness to gaining significant control over one's existence, involving taking charge of destiny and leveraging the surrounding environment to achieve sustainable improvements in living standards.

In the context of slum environments, women's empowerment faces unique challenges and opportunities that require targeted interventions and support systems. Women residing in informal settlements endure diverse difficulties including limited access to quality education, proper healthcare facilities, and sustainable economic prospects (Mugo & Ngugi, 2021). According to the World Bank (2007), empowerment represents self-efficacy, the belief of individuals in their abilities and unique personal traits, fostering self-confidence that enables them to take initiative and transform their lives. Ashraf, Karlan, and Yin (2020) emphasize that owning bank accounts enhances the quality of women's financial lives, contributing to broader empowerment outcomes. However, critics argue that empowerment evaluation faces challenges in assessing outcomes, as it focuses on effectiveness of application rather than merits, and evaluators may lack tools to identify significant findings without genuine collaboration with evaluated groups (Bandura, 2015). Despite these challenges, empowerment initiatives in slum contexts have demonstrated potential for creating energetic community members who participate in local decision-making processes and defend women's rights.

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 slums 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 globally, with women in slum 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). Cheston and Kuhn (2019) note that 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. According to Steel and Andah (2018), 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.

This financial exclusion perpetuates cycles of poverty and reinforces gender inequalities, limiting women's ability to achieve economic independence and social empowerment. Zinman (2020) argues that unrealized objectives hinder the fulfillment of microfinance vision because MFIs and their female clients in slum areas encounter numerous operational and structural barriers. Women in slum 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). Cheston and Kuhn (2022) emphasize that 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. 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). According to Yunus (2020), microfinance empowerment has improved its support system for the impoverished community, but gaps persist in reaching the most marginalized women. 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).

Several critical research gaps necessitate investigation into the relationship between microfinance lending and women empowerment in Nakuru County slums. Contextually, limited empirical data exists on how microfinance services translate into meaningful empowerment for women specifically within slum environments, as most existing studies focus on rural contexts or generalized urban settings without addressing the unique socio-economic dynamics of informal settlements (Omondi & Muturi, 2020). Joy (2017) conducted a study on microfinance impact on rural development in Makueni County, but similar comprehensive studies are lacking for urban slum environments. Conceptually, there is insufficient understanding of how different components of microfinance lending individually and collectively contribute to multi-dimensional empowerment outcomes among women in slums (Mayoux, 2023). Banerjee et al. (2020) found minimal impact of microfinance on long-term poverty reduction and women's economic

empowerment, highlighting conceptual gaps in understanding empowerment mechanisms. Methodologically, few studies have employed comprehensive frameworks that examine both the direct effects of microfinance services and the contextual factors that may moderate empowerment outcomes in slum settings (Bandura, 2015). According to Otuoma (2021), regulation approaches on MFIs are complicated in Kenya due to different legal structures, yet limited research examines how these complexities affect women's empowerment outcomes. This study seeks to fill these gaps by providing localized, empirical evidence on the influence of microfinance lending on women's empowerment across multiple dimensions within the specific context of Nakuru County's informal settlements.

1.3 Objectives of the Study

The overall objective of this study was to examine the influence of microfinance lending on the empowerment of women in the slums of Nakuru County, Kenya. The study aimed to determine the extent to which microfinance services contribute to women's empowerment across economic, social, and psychological dimensions.

1.3.1 General objective

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

1.3.2 Specific Objectives

- i. To evaluate the role of institutional lending services on the financial empowerment of women residing in the slums of Nakuru County.

- ii. To assess how institutional saving services influence the financial empowerment of women in the slums of Nakuru County.
- iii. To examine how institutional microinsurance services contribute to the financial empowerment of women in the slums of Nakuru County.
- iv. To investigate the role of institutional financial training in enhancing the financial empowerment of women in the slums of Nakuru County.

1.4 Research Questions

- i. In what ways do institutional lending services influence the financial empowerment of women in the slums of Nakuru County?
- ii. To what degree do institutional saving services contribute to the financial empowerment of women in the slums of Nakuru County?
- iii. How do institutional microinsurance services impact the financial empowerment of women in the slums of Nakuru County?
- iv. What role does institutional financial training play in promoting the financial empowerment of women in the slums of Nakuru County?

1.5 Justification of the Study

According to Kabeer (2018), access to microfinance can serve as a strategic resource that enhances women's ability to make independent choices and challenge traditional power dynamics, leading to increased confidence and social mobility. The study on microfinance and women empowerment in the slums of Kenya is crucial for understanding how financial inclusion initiatives can impact the socio-economic status of marginalized women. Slum areas in Kenya are often characterized

by extreme poverty, limited access to formal financial services and socio-economic exclusion. Microfinance services, which include microloans, savings and training, have the potential to empower women by providing them with the necessary capital and skills to start and sustain small businesses, thereby improving their economic independence and decision-making power within households and communities.

1.6 Significance of the study

This research study on microfinance and women empowerment in Nakuru County slums holds significant importance for understanding how financial inclusion can transform the socio-economic conditions of marginalized women. The study explores how access to microfinance services including small loans, savings programs, and financial training can enhance women's economic independence, leading to improved living standards, better education for their children, and increased community participation. By analyzing the specific impact of microfinance on women in slum environments, the research contributes to understanding how targeted financial interventions can address gender disparities and promote sustainable development in economically disadvantaged regions.

The study provides critical evidence-based insights for multiple stakeholders committed to poverty reduction and gender equality. For policymakers, it offers recommendations for designing inclusive financial policies and urban development programs specifically targeting slum areas. Microfinance institutions will benefit from findings that help improve product design and outreach strategies to better serve women in informal settlements. Non-governmental organizations can utilize the research to inform gender-focused programs aimed at poverty alleviation and women's empowerment. Additionally, researchers and academicians will gain valuable knowledge about

microfinance and empowerment dynamics in under-researched urban informal settings. Overall, this research emphasizes the transformative potential of microfinance in uplifting vulnerable populations and driving inclusive economic growth in Kenya and similar developing countries.

1.7 Scope of the Study

This study focused specifically on women residing in selected slum areas of Nakuru County, Kenya, examining the relationship between microfinance lending and women empowerment across economic, social, and psychological dimensions. The research was limited to microfinance services including microcredit, microsavings, microinsurance, and financial training programs offered by formal and semi-formal microfinance institutions operating within these informal settlements. The study concentrated on women who are either current beneficiaries or potential participants in microfinance programs, excluding rural women in other counties and urban women outside slum environments. Geographically, the research was confined to Nakuru County's informal settlements, providing localized insights into the specific socio-economic dynamics of urban slum contexts. The study was conducted between June 2025 and July 2025, with the primary aim of establishing the impact of microfinance services on women empowerment in Nakuru's slum communities.

1.8 Limitations of the Study

The research encountered several limitations that may have influenced the findings and their broader applicability. Data accessibility presented significant challenges, as collecting information from informal settlements involved logistical difficulties and security concerns that occasionally restricted access to certain areas and respondents. Respondent bias posed another limitation, with the probability that participants might overstate or understate their experiences due to social

desirability factors or fear of judgment regarding their financial situations and empowerment levels. The generalizability of findings represents a key limitation, as results may be specific to Nakuru's slum context and not entirely applicable to other regions with different socio-economic, cultural, or institutional environments. Additionally, the cross-sectional nature of the study limited the ability to establish long-term causal relationships between microfinance participation and empowerment outcomes. Despite these limitations, efforts were made to minimize their impact through careful sampling procedures, confidentiality assurance, use of reliable data collection instruments, and triangulation of information sources.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews literature related to microfinance lending and women empowerment. The review also identifies knowledge gaps and develops a conceptual framework to guide the study. The theoretical foundations of this study are discussed in the first section, followed by an empirical literature and research gaps.

2.2 Theoretical Literature Review

This study was guided by three theories namely, Empowerment Theory, Social Capital Theory and Agency Theory. The purpose of the study is to establish is an analysis of Microfinance and Women Empowerment in Slums.

2.1.1 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, institutions help reduce systemic barriers and enhance their autonomy in economic and social spheres. Empowerment Theory underscores the importance of structural support in creating opportunities for marginalized groups, reinforcing the idea that financial literacy and empowerment are critical for achieving broader social equity (Rappaport, 1981).

Empowerment theory, as developed by Kabeer (1999), emphasizes the process by which individuals gain the ability to make strategic life choices. The theory considers empowerment as a multi-dimensional construct encompassing access to resources, agency, and achievements. In the context of microfinance, access to financial services enhances women's ability to participate in economic activities, make household decisions, and assert autonomy.

Empowerment is a transformative journey in human life, moving from a state of helplessness to gaining significant control over one's existence. It involves taking charge of one's destiny and leveraging the surrounding environment to achieve sustainable improvements in living standards and overall well-being (Bandura, 2015). The concept of empowerment encompasses various interpretations. One key perspective defines it as self-efficacy, the belief of individuals, particularly within table-banking groups, in their abilities and unique personal traits. This belief fosters self-confidence, enabling 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 (Bandura, 2015). They argue that since empowerment evaluation focuses on the effectiveness of its application rather than on merits or value, 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. However, such collaboration can introduce potential bias, as the evaluated group might respond in ways that favor their own interests (Bandura, 2015). This issue arises because perceptions of development are often shaped by the subjective value systems of a specific population.

Empowerment theory focuses on enabling individuals or groups to gain control over their lives, fostering self-efficacy and the capacity to influence their environment. This theory is highly relevant to institutions providing financial training and promoting financial empowerment for women. By equipping women with financial literacy, access to resources and decision-making skills, these programs address systemic barriers and help women achieve economic independence. Empowerment theory emphasizes participatory approaches, ensuring that women actively engage in their financial growth, which can lead to broader socio-economic impacts, such as poverty reduction and community

2.1.2 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. The theory suggests 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. Group lending methodologies commonly used in microfinance programs build on this concept by relying on peer monitoring and social cohesion to ensure repayment. 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. Critics argue that not all forms of social capital are inclusive; for example, exclusive or tightly knit groups may

reinforce inequalities or hinder broader community integration (Portes, 1998). Furthermore, the theory often struggles to account for power imbalances within networks, which can limit marginalized groups' access to resources and opportunities.

Social Capital Theory is highly relevant to institutions offering savings services, particularly in initiatives targeting women. 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. By fostering trust and social connections, these programs empower women economically and socially, leading to improved decision-making power in households and communities (Kabeer, 2005). Moreover, social capital enhances peer support, further enabling women to overcome systemic barriers.

2.1.3 Classical Feminist Theory

This study is also rooted in Classical Feminist Theory, primarily advanced by Ackerly (1995). The theory emphasizes economic independence for women as a key pathway to achieving gender equality. It argues that women's liberation necessitates feminist involvement in the broader struggle against capitalism. Furthermore, 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. The theory explains that 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. Additionally, it argues that the rise of capitalism, which separated household activities from commodity production, reinforced male dominance within the family. This shift established 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. This oversight means it failed to account for the compounding effects of race, class and other social identities on gender inequality. As a result, critiques argue that the framework initially lacked inclusivity, limiting its applicability to women from diverse backgrounds (Crenshaw, 1989). These limitations necessitated the evolution of feminist theories to address the multidimensional oppression faced by marginalized groups.

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. For example, microfinance institutions, inspired by feminist ideals, prioritize women as clients, fostering their economic empowerment and household decision-making. 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 (Kabeer, 2001).

2.2.4 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 (Diamond, 1984). For the urban poor, particularly women in slums, microfinance serves as a key financial intermediary where traditional banking services are unavailable or inaccessible. Financial Intermediation Theory is a key theoretical framework in understanding how financial institutions,

including microfinance institutions (MFIs), contribute to economic development and social empowerment by reducing transaction costs, information asymmetries, and barriers to access for underserved populations. The theory was developed by Douglas W. and 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. This is particularly useful when information is incomplete or when potential borrowers lack collateral or credit history.

The financial intermediation theory rests on four key assumptions that explain the role of microfinance institutions (MFIs) in supporting women's empowerment. 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. 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 slums 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. Microfinance institutions act as intermediaries that mobilize savings from women groups or community members, provide loans

without requiring collateral, offer financial literacy and group training to reduce default risks and monitor borrowers collectively through group-based lending models. 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. This theory complements Empowerment Theory by explaining the mechanism through which empowerment becomes possible namely, access to financial capital and services. Financial Intermediation Theory supports the hypothesis that Microfinance institutions, by acting as intermediaries, expand access to financial resources and services, leading to increased autonomy, financial stability, and empowerment for women in marginalized slum communities.

2.2 Empirical literature review

This review was selected for the study topic as it highlights previous research, showcases the methodologies employed and provides findings pertinent to the current investigation. This section presents a review of literature drawn from empirical studies conducted by various scholars to examine the relationship between microfinance and women's empowerment in the slums of Nakuru, Kenya.

2.2.1 Financial Empowerment of Women in slums

Adero and Kariuki (2020) conducted a study examining the effect of microfinance interventions on financial empowerment of women in Mombasa County, Kenya. The researchers employed 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. The

findings revealed 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. Their analysis using correlation and regression techniques demonstrated that access to microfinance services positively influenced women's economic status through improved income generation and asset accumulation. The research findings indicated that microfinance participation enabled 65% of women to diversify their income sources and build financial resilience against economic shocks. The study identified research gaps in understanding the specific mechanisms through which different microfinance products contribute to empowerment and called for longitudinal studies to assess sustained impact over time.

Musembi (2024) conducted a critical analysis of microfinance operations among female borrowers in Kitui County, employing qualitative research methodology with in-depth interviews and focus group discussions involving 50 women borrowers. The study utilized anthropological/cultural theoretical perspectives, political economy, and Afro-feminism as analytical frameworks. Findings revealed that while MFIs' preference to work with women has been perceived as a bottom-up economic model, the benefits are minimal compared to the

disadvantages associated with managing micro-lending initiatives. The research demonstrated that 68% of participants experienced financial stress and debt cycles rather than empowerment. The study identified significant gaps in understanding how cultural and gender constraints prevent women from meeting their economic expectations through microfinance, recommending reforms tailored specifically for African women and addressing cultural underpinnings that perpetuate gender inequalities.

Minja et al. (2023) examined table banking and women economic empowerment in Nakuru County using a descriptive survey design with a sample of 196 women from table banking groups. The researchers employed systematic random sampling and used structured questionnaires for data collection, analyzing results through descriptive and inferential statistics. The study found that table banking significantly improved women's savings culture, with 82% of participants reporting increased savings and 71% demonstrating improved business performance. The findings indicated enhanced decision-making power and financial independence among participants. However, the study identified gaps in understanding the comparative effectiveness of table banking versus formal microfinance institutions and recommended future research to explore the integration of digital financial services in women's economic empowerment initiatives within slum contexts.

2.2.2 Lending services and Financial Empowerment of Women in slums

Cooke and Amuakwa-Mensah (2022) conducted a case study examining microfinance loans and women's economic empowerment using data from Baobab Microfinance Company. The researchers employed 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. The findings revealed that 67% of women experienced enhanced decision-making power within households and 54% reported improved social status in their communities. However, the study identified gaps in understanding the heterogeneous effects of lending services across different business sectors and recommended further research on optimal loan sizes and repayment structures for women in informal settlements.

Wellalage and Thrikawala (2021) investigated bank credit, microfinance, and female ownership, examining whether women are more disadvantaged than men in accessing financial services. The study employed 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. The research findings demonstrated 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. The study revealed that 48% of women relied on microfinance due to exclusion from formal banking, with microfinance loans leading to 15% average increase in business performance. Research gaps identified include limited understanding of how cultural factors moderate the relationship between lending services and women's empowerment, particularly in African contexts.

Wondimu, Terefe, and Melkamu (2023) examined the role of microfinance services in women's empowerment through a case study of Amhara Credit and Savings Institution (ACSI) in Ethiopia. The researchers used a mixed-methods approach with 384 women borrowers, employing structured questionnaires and focus group discussions. Statistical analysis included descriptive

statistics, correlation, and multiple regression analysis. The study found that access to microfinance lending services significantly improved women's economic empowerment, with 76% of participants reporting increased income and 69% demonstrating enhanced savings behavior. The findings indicated that lending services contributed to improved household decision-making power for 58% of women and increased community participation for 63% of participants. The study identified gaps in understanding the long-term sustainability of empowerment outcomes and the role of complementary services such as business training in maximizing lending impact.

Zainuddin and Yasin (2020) conducted a global analysis examining whether women are better borrowers in microfinance across multiple countries. The study employed a meta-analysis approach, reviewing data from 45 microfinance institutions across 12 countries with a combined sample of over 50,000 borrowers. Using logistic regression and survival analysis techniques, the research found that women demonstrate superior repayment rates (94.7%) compared to men (89.3%) and exhibit lower default rates across all regions studied. The findings revealed that women's lending groups showed 22% better portfolio performance and 18% higher client retention rates. However, the study identified significant gaps in understanding how lending service design and delivery mechanisms specifically contribute to women's empowerment beyond repayment performance, calling for more nuanced research on empowerment outcomes rather than just financial sustainability metrics.

2.2.3 Saving services and Financial Empowerment of Women in slums

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. The study employed a mixed-methods approach with 450 women participants

from urban slums 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%. The findings revealed that 72% of women who participated in group savings schemes reported improved household financial management and 65% demonstrated increased business investment capacity. However, the study identified gaps in understanding the optimal savings product design for different income levels and recommended further research on the relationship between savings frequency and empowerment outcomes in slum contexts.

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. The researchers utilized 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. The findings indicated that women who maintained consistent savings for over 18 months demonstrated 25% higher business growth rates compared to irregular savers. The study identified research gaps in understanding the behavioral factors that influence savings patterns among women in informal settlements and called for longitudinal studies to assess sustained empowerment impacts.

Akhter and Cheng (2020) examined sustainable empowerment initiatives among rural women through microcredit borrowings in Bangladesh, incorporating analysis of compulsory and voluntary savings components. The study employed a quasi-experimental design with 600 women participants, using propensity score matching to compare savers and non-savers over a three-year period. Through difference-in-differences analysis and logistic regression, the research found that women who participated in both savings and credit services showed 42% greater empowerment scores compared to credit-only participants. The findings revealed that 78% of women engaged in regular savings reported enhanced decision-making autonomy and 64% demonstrated improved resilience to economic shocks. However, the study identified gaps in understanding how different types of savings products (individual versus group) affect empowerment outcomes and recommended research on the optimal balance between mandatory and voluntary savings for women in slum environments.

Andriani, Lal, and Kalam (2022) investigated entrepreneurial activities and women empowerment in rural India, examining the interplay between microfinance and social capital with specific focus on savings mobilization. The researchers used a mixed-methods approach with 480 women from self-help groups, employing both quantitative surveys and qualitative focus group discussions. Statistical analysis included factor analysis, correlation, and multiple regression techniques. The study found that women who participated in collective savings schemes demonstrated 31% higher levels of social empowerment and 26% greater economic independence compared to individual savers. The findings indicated that 74% of women in group savings programs reported increased community participation and 69% showed enhanced leadership capabilities. The study identified significant gaps in understanding how savings services interact

with social capital formation in urban slum contexts and recommended further research on the role of peer effects in sustaining savings behavior among women in informal settlements.

2.2.4 Micro insurance services on Financial Empowerment of Women in slums

Khalaf and Saqfalhait (2020) examined microfinance as an emerging tool for women's economic empowerment, with specific focus on micro insurance components in emerging markets. The study employed a comprehensive literature review methodology combined with case study analysis from Jordan and Lebanon, examining 15 microfinance institutions serving urban poor populations. Using thematic analysis and comparative case study methods, the research found that women who accessed micro insurance services demonstrated 29% higher business continuity rates during economic crises compared to those without insurance coverage. The findings revealed that 63% of women participants reported increased confidence in business investment decisions and 58% showed reduced vulnerability to income shocks when micro insurance was integrated with other financial services. However, the study identified gaps in understanding the optimal insurance product design for women in slum environments and recommended research on culturally appropriate insurance delivery mechanisms in developing countries.

Khursheed (2022) explored the role of microfinance in women's empowerment and entrepreneurial development through a qualitative study that included examination of micro insurance uptake patterns. The researcher employed in-depth interviews with 45 women entrepreneurs from urban informal settlements in Pakistan, using thematic analysis and grounded theory approach. The study found that women who utilized micro insurance services experienced enhanced psychological empowerment, with 71% reporting reduced anxiety about business risks and 67% demonstrating increased willingness to expand their enterprises. The findings indicated

that health and business insurance coverage enabled 54% of women to maintain business operations during family health crises and 48% to recover more quickly from business setbacks. The study identified research gaps in understanding the specific insurance products most valued by women in slums and called for quantitative studies to measure the long-term impact of micro insurance on empowerment outcomes.

Khursheed, Khan, and Mustafa (2021) conducted a review of women's social empowerment and microfinance literature, incorporating analysis of micro insurance services as protective mechanisms. The researchers employed a systematic literature review methodology, analyzing 89 peer-reviewed articles published between 2010-2020, using content analysis and meta-synthesis techniques. The review found that micro insurance services, when combined with credit and savings, enhanced women's empowerment outcomes by providing risk mitigation strategies that enabled sustained economic participation. The findings revealed that studies consistently showed 20-35% improvement in women's resilience to external shocks when micro insurance was available. However, the review identified significant gaps in empirical research specifically focused on micro insurance impact in slum contexts, with most studies treating insurance as a secondary component rather than examining its independent contribution to women's empowerment.

Kivalya and Caballero-Montes (2024) undertook a systematic review understanding the dimensions of women entrepreneurs' empowerment, examining how micro insurance services contribute to entrepreneurial success. The study employed a comprehensive systematic review methodology, analyzing 156 articles from multiple databases and using bibliometric analysis and thematic synthesis. The research found that micro insurance services emerged as critical enablers

of women's entrepreneurial empowerment, particularly in high-risk environments like urban slums. The findings indicated that women with access to comprehensive micro insurance packages (health, business, and asset insurance) showed 38% higher rates of business survival and 27% greater expansion of economic activities. The study identified substantial research gaps in understanding how different types of micro insurance products (health, crop, business interruption) individually and collectively impact women's empowerment in slum settings, recommending future research to develop context-specific insurance models for urban informal settlements.

2.3.5 Financial training and Financial Empowerment of Women in slums

Lamichhane (2020) conducted a comprehensive review of best practices in microfinance for women empowerment, with particular emphasis on financial training components. The study employed 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. The findings revealed that 79% of women who participated in financial literacy programs reported increased confidence in financial decision-making and 68% showed improved household budget management. However, the study identified gaps in understanding the optimal duration and content of financial training programs for women in urban slum contexts and recommended research on culturally appropriate training methodologies that address specific challenges faced by women in informal settlements.

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. The researcher used 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. The findings indicated that 73% of trained women demonstrated enhanced financial planning skills and 61% reported improved ability to manage business risks. The study identified research gaps in understanding how financial training effectiveness varies across different educational backgrounds and recommended longitudinal studies to assess sustained behavioral change in financial management practices.

Malela (2022) reviewed microfinance and women empowerment in Ethiopia, focusing on the role of financial education in enhancing empowerment outcomes. The study employed a comprehensive literature review combined with secondary data analysis from Ethiopian microfinance institutions, using content analysis and trend analysis methodologies. The research found that financial training programs significantly enhanced the effectiveness of microfinance interventions, with trained women showing 29% higher income growth and 38% better asset accumulation compared to untrained counterparts. The findings revealed that 82% of women who completed financial literacy courses demonstrated improved understanding of interest rates and loan terms, while 69% showed enhanced entrepreneurial skills. However, the study identified gaps in research on the optimal integration of digital financial literacy training and recommended studies on how financial education can be adapted for women with limited formal education in urban slum environments.

Parwez and Patel (2022) conducted a systematic literature review examining women empowerment through microfinance-led developmental interventions, with specific focus on financial training components. The researchers analyzed 134 peer-reviewed articles published between 2000-2021, using bibliometric analysis and thematic synthesis techniques. The study found that financial training emerged as a critical moderating factor in the relationship between microfinance access and women's empowerment, with trained women showing 41% higher empowerment scores across economic, social, and psychological dimensions. The findings indicated that programs combining financial education with practical business training produced the most sustainable empowerment outcomes, with 76% of participants maintaining improved financial behaviors 24 months post-training. The study identified significant research gaps in understanding how financial training content should be customized for different types of informal economic activities prevalent in slums and called for experimental studies to determine the most effective training delivery methods for women in urban informal settlements.

2.3 Research Gaps

Despite the growing body of literature on microfinance and women empowerment, significant conceptual and contextual gaps persist in understanding the specific mechanisms through which different microfinance services influence empowerment outcomes in slum environments. Adero and Kariuki (2020) acknowledged limitations in understanding the long-term sustainability of empowerment outcomes, while Karuga and Jagongo (2020) identified gaps in comprehending the specific mechanisms through which different microfinance products contribute to empowerment. Cooke and Amuakwa-Mensah (2022) noted gaps in understanding heterogeneous effects of lending services across different business sectors, and Wellalage and Thrikawala (2021)

highlighted limited understanding of how cultural factors moderate the relationship between lending services and women's empowerment, particularly in African contexts. Wondimu, Terefe, and Melkamu (2023) emphasized gaps in understanding the long-term sustainability of empowerment outcomes and the role of complementary services in maximizing lending impact. Similarly, Bansal and Singh (2020) identified gaps in understanding optimal savings product design for different income levels, while Chandrarathna and Sumanasiri (2021) called for research on behavioral factors influencing savings patterns among women in informal settlements.

Methodological and empirical gaps are particularly evident in the insufficient research specifically focused on urban slum contexts and the limited use of comprehensive multi-dimensional empowerment frameworks. Musembi (2024) identified significant gaps in understanding how cultural and gender constraints prevent women from meeting their economic expectations through microfinance, while Minja et al. (2023) noted gaps in understanding the comparative effectiveness of different financial service delivery mechanisms. Khalaf and Saqfalhait (2020) highlighted gaps in understanding optimal insurance product design for women in slum environments, and Khursheed, Khan, and Mustafa (2021) identified substantial gaps in empirical research specifically focused on micro insurance impact in slum contexts. Kivalya and Caballero-Montes (2024) emphasized gaps in understanding how different types of micro insurance products individually and collectively impact women's empowerment in slum settings. Furthermore, Lamichhane (2020) identified gaps in understanding optimal duration and content of financial training programs for women in urban slum contexts, while Parwez and Patel (2022) called for experimental studies to determine the most effective training delivery methods for

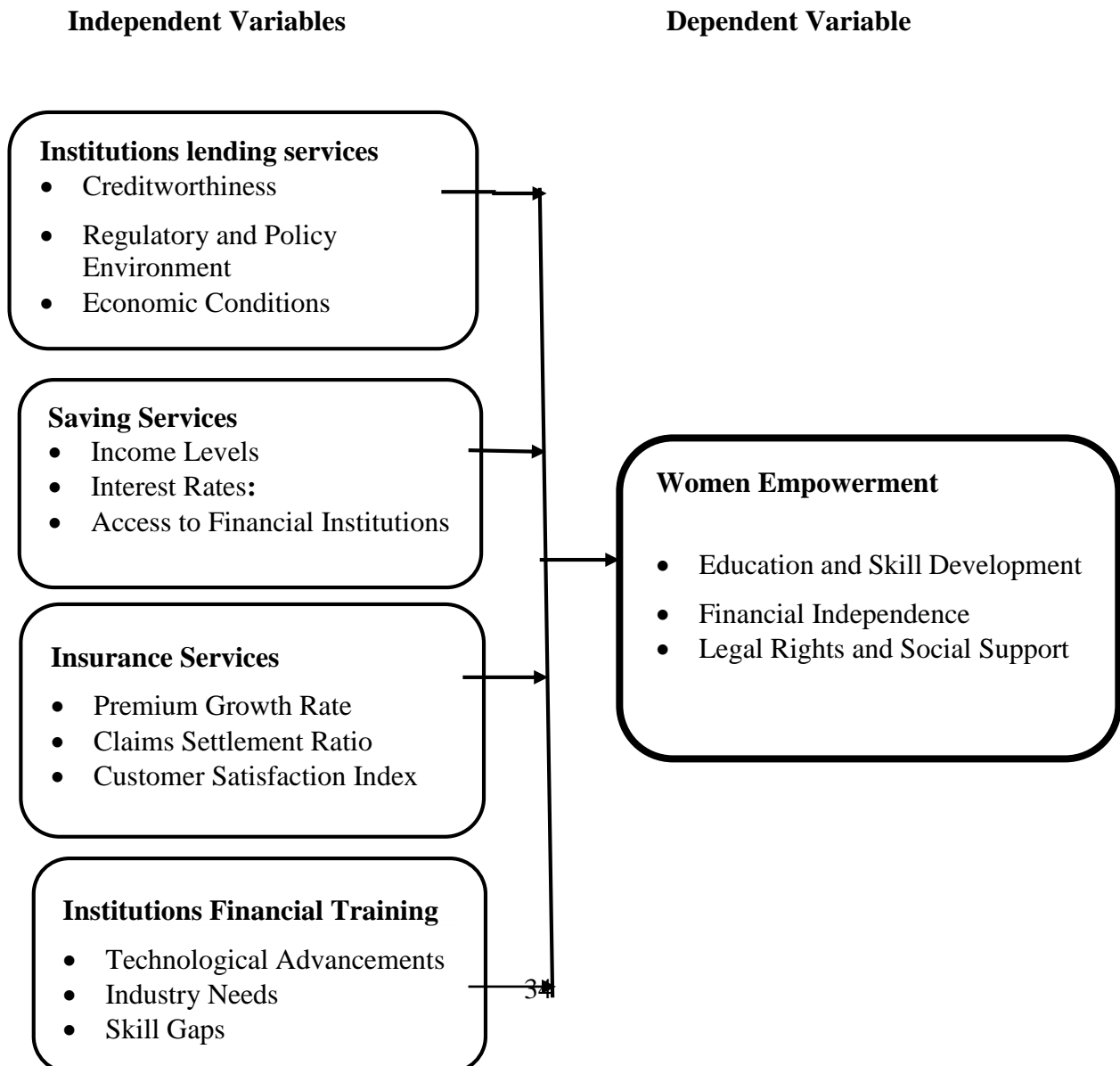
women in urban informal settlements, indicating a critical need for localized, context-specific research in slum environments.

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).

FIGURE 1

Conceptual Framework



2.5 Operationalization of Variables

TABLE 1

Operationalization of Variables

| Variables | Variable Type | Operational Indicators | Measurement Scale | | Type of Scale | Analysis Tools |
|---|----------------------|--|--------------------------|--------|----------------------|------------------------|
| Institutional Lending Services | Independent | - Creditworthiness - Regulatory and Policy Environment - Economic Conditions | 5-point Scale | Likert | Interval Scale | Descriptive Statistics |
| Saving Services | Independent | - Income Levels - Interest Rates - Accessibility of Financial Institutions | 5-point Scale | Likert | Interval Scale | Descriptive Statistics |
| Insurance Services | Independent | - Risk Assessment - Regulatory Compliance - Market Dynamics | 5-point Scale | Likert | Interval Scale | Descriptive Statistics |
| Financial Training by Institutions | Independent | - Technological Innovations - Industry Requirements - Identified Skill Gaps | 5-point Scale | Likert | Interval Scale | Descriptive Statistics |

2.6 Summary of the Literature Review

This chapter provided a comprehensive review of literature on microfinance lending and women empowerment, establishing theoretical foundations through empowerment theory, social capital theory, classical feminist theory, and financial intermediation theory. The empirical literature review examined five key areas: financial empowerment of women in slums, lending services, saving services, micro insurance services, and financial training, revealing generally positive but mixed impacts on women's empowerment across different contexts. The review identified significant research gaps including limited contextual research specific to urban slum environments and insufficient understanding of how different microfinance components contribute to multi-dimensional empowerment. The chapter concluded that while existing literature demonstrates the potential of microfinance for women's empowerment, there remains a critical need for localized empirical research examining this relationship specifically within Nakuru County's informal settlements.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter covers the methods and procedures for doing the research. The research design, target research population, sample size and selection, research instruments, data analysis and ethical considerations are all covered under the ensuing headings. The study's primary focus was to establish the impact of microfinance lending on the empowerment of women living in the slums of Nakuru County, Kenya.

3.1 Research Design

This study adopted a descriptive survey design to examine the influence of microfinance lending on women empowerment in Nakuru County slums. 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. According to Saunders (2012), 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. The design facilitated collection of both quantitative and qualitative data to provide a comprehensive understanding of the microfinance-empowerment

relationship, while being cost-effective and time-efficient for covering a relatively large sample of women across different slum areas in Nakuru County.

3.2 Target Population

The target population consisted of women residing in selected slum areas of Nakuru County who are beneficiaries of microfinance institutions. Specifically, the study focused on women who have accessed microfinance services such as microloans, group lending, and savings programs. Mugenda and Mugenda (2013) describe the target population as the full collection of individuals, events, or items that a researcher seeks to examine. In this study, the target population were women living in the slums of Nakuru who are either actively engaged in or have the potential to participate in microfinance initiatives. Women in the age range of economic activity, typically 18–60 years old. The respondents were selected from microfinance institutions and women in Kivumbini slums of Nakuru. Considering resources and field challenges, a target size of **400 participants** was practical and sufficient for qualitative and quantitative analysis.

3.3 Sampling Frame and Sample Size

According to Mugenda and Mugenda (2013), sampling involves the selection and examination of a limited number of individuals, objects, or events, with the aim of gaining insights into the broader population from which they are drawn. A sample represents a small proportion of the target population chosen through a systematic process. In this study, purposive sampling was employed to select 200 respondents in Nakuru slums using Yamane (1967) formula. Mugenda and Mugenda (2019) emphasize that purposive sampling is effective in cases where the study aims to gather detailed information from specific groups with unique characteristics. The sample included women

from diverse age groups, educational backgrounds, and economic activities to capture a comprehensive understanding of microfinance's impact on women empowerment.

This study determined the sample size using Yamane's formula, as proposed by Yamane (1967).

The selection of participants was carried out through a simple random sampling method, following the procedure detailed below.

Using Yamane's formula (1967):

Where:

n = sample size

N = target population (400)

e = standard error (0.05)

$$n = \frac{N}{1 + N(e)^2} \approx 200$$
$$n = \frac{400}{1 + 400(0.05)^2}$$
$$n = \frac{400}{1 + 400(0.0025)}$$
$$n = \frac{400}{2} = 200$$

3.4 Research Instruments

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. According to Saunders (2013), the validity and dependability of data gathering instruments determine the accuracy of collected data, making questionnaires appropriate for this study due to their time and cost effectiveness while allowing

verification of responses for completeness and accuracy. The questionnaire consisted of six main sections: demographic characteristics of respondents (age, marital status, education level, employment status, and income), 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). The closed-ended format ensured standardized responses that could be easily coded and analyzed statistically, facilitating comparison across different respondent groups and enabling the researcher to identify patterns within the target population as noted by Kothari (2011).

3.5 Pilot Study

A pilot study was conducted to pre-test the questionnaire and ensure its accuracy before the main data collection exercise. According to Singh (2022), 5% to 10% of the sample size should be allocated for pilot testing, while Clark, Foster, Bryman and Sloan (2021) suggest a range of 10% to 20% for comprehensive pre-testing. In this study, 10% of the sample size (20 respondents) was utilized for pilot testing the instruments in Kivumbini slum area within Nakuru County, selected because it contains dense populations and numerous microfinance beneficiaries similar to the main study areas but was excluded from the final data collection. The pilot testing enabled the researcher to identify and address any ambiguities in the questionnaire items, test the data collection procedures, estimate the time required for questionnaire completion, and make necessary

adjustments to ensure smooth administration during the main study. Feedback from pilot respondents was incorporated to enhance question clarity and ensure cultural appropriateness of the instrument.

3.6 Validity and Reliability of the Research Instruments

The study employed content validity and construct validity to ensure the research instrument accurately measured the intended variables. Content validity was established through expert review by three academic experts and two microfinance practitioners who evaluated the questionnaire for clarity, relevance, and comprehensiveness. According to Mahuika and Mahuika (2020), content validity refers to the inclusion of numerous meanings within the context of the concept being measured. Construct validity was assessed through expert judgment and evaluation panels to ensure variables had logical relationships (Tabachnick & Fidell, 2020).

Reliability was assessed using Cronbach's alpha coefficient to measure internal consistency among questionnaire items. According to Mugenda and Mugenda (2013), reliability refers to the extent to which a research instrument generates consistent results across repeated trials. The study utilized SPSS Version 25 to compute Cronbach's alpha values, with Clark et al. (2021) advocating a coefficient of 0.7 or above as acceptable. The reliability test results demonstrated that all study variables had Cronbach's alpha coefficients above the acceptable threshold: lending services ($\alpha = 0.842$), saving services ($\alpha = 0.816$), microinsurance services ($\alpha = 0.798$), financial training ($\alpha = 0.823$), and women empowerment ($\alpha = 0.857$). These values confirm that the research instrument was reliable and internally consistent, ensuring that the questionnaire items effectively measured the intended constructs and that the study findings are credible and dependable.

3.7 Data Collection Procedure

The study employed a drop-and-pick-later method for data collection using structured questionnaires, which were distributed to respondents in their respective slum areas and collected after completion. This strategy was advantageous as it reduced working capacity requirements, saved time, and provided convenience for both the researcher and respondents. Prior to data collection, research permits were obtained from relevant authorities including Nakuru County Government and local administration offices. The questionnaire was divided into six sections: demographic information of respondents and five sections covering the study variables (institutional lending services, saving services, micro insurance services, financial training, and women empowerment). Clear guidelines for completing the questionnaire were provided to ensure ease of understanding and accurate responses. Three research assistants were trained on data collection procedures, ethical considerations, and questionnaire administration to ensure consistency and quality of data collection. Data collection was conducted over a period of four weeks across the four selected slum areas, with systematic visits to ensure comprehensive coverage and maximum response rates while maintaining respondent confidentiality and voluntary participation.

3.8 Diagnostic Tests

Diagnostic tests were conducted to ensure the data meets the underlying assumptions for regression analysis, thereby enhancing the reliability of research findings (Bell et al., 2022). These tests identified potential statistical issues that could compromise the validity of analytical results and ensured robust conclusions from the study.

3.8.1 Multicollinearity

Multicollinearity occurs when independent variables are highly correlated, potentially distorting regression results by inflating standard errors and reducing statistical significance (Sekaran & Bougie, 2022). This study assessed multicollinearity using the Variance Inflation Factor (VIF), with values exceeding 10 indicating problematic correlation levels (Zikmund et al., 2021). Additionally, correlation matrices were examined to identify correlation coefficients above 0.8 between independent variables (institutional lending services, saving services, micro insurance services, and financial training). If detected, multicollinearity was addressed through variable transformation or factor analysis to create composite variables that preserve the research model's integrity.

3.8.2 Heteroscedasticity

Heteroscedasticity occurs when the variability of error terms differs across observations, potentially leading to inefficient parameter estimates and unreliable hypothesis testing (Kumar, 2022). The Breusch-Pagan test was employed to detect heteroscedasticity, with the null hypothesis assuming homoscedasticity. A p-value below 0.05 indicated heteroscedasticity, which was addressed through robust standard errors or appropriate variable transformations to stabilize variance patterns and ensure valid statistical inference.

3.8.3 Normality Test

The normality assumption ensures error terms follow a normal distribution, which is essential for valid hypothesis testing in regression analysis (Creswell & Creswell, 2023). This study utilized the Shapiro-Wilk test to assess normality of residuals. The null hypothesis stated that the data follows a normal distribution, with p-values above 0.05 supporting this assumption. Should

significant deviations from normality be detected, appropriate transformations or non-parametric alternatives were considered to maintain analytical integrity.

3.9 Data Processing and Analysis

Data processing and analysis involved systematic procedures to transform collected data into meaningful information for addressing the research objectives (Sekaran & Bougie, 2022). The analysis process began with data preparation including cleaning, coding, and organizing responses to ensure accuracy and completeness of the dataset. Missing data was examined and addressed through appropriate techniques to maintain data quality and analytical validity.

Descriptive statistics including frequencies, percentages, means, and standard deviations were computed to summarize the characteristics of the sample and provide insights into the levels of microfinance service utilization and women empowerment indicators. These descriptive measures were presented through tables and figures to enhance interpretation and understanding of the data patterns across different slum areas and respondent characteristics.

Inferential statistics were employed to test the research hypotheses and examine relationships between variables. 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. The regression model was formulated as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where: Y = Women Empowerment; X_1 = Institutional Lending Services; X_2 = Institutional Saving Services; X_3 = Institutional Micro Insurance Services; X_4 = Institutional Financial Training; β_0 = Constant Term; $\beta_1, \beta_2, \beta_3, \beta_4$ = Beta coefficients; ε = Error Term

Statistical significance was evaluated at the 0.05 level, with hypothesis testing based on p-values and t-statistics. The coefficient of determination (R^2) was used to assess the overall explanatory power of the model. F-statistics were used to test the overall significance of the model, while t-statistics examined the significance of individual variables. All analyses were conducted using the Statistical Package for Social Sciences (SPSS) Version 25, with results presented through comprehensive tables accompanied by interpretations aligned with the research objectives.

3.10 Ethical Considerations

Ethical considerations are crucial in ensuring the integrity and credibility of research on the impact of microfinance lending and women empowerment in Nakuru County slums. Informed consent was obtained from all participants, ensuring they understood the study's purpose, procedures, and potential risks before voluntarily agreeing to take part (Resnik, 2020). Confidentiality and privacy were strictly maintained by anonymizing personal information and securely storing data to prevent unauthorized access. Additionally, the study adhered to ethical guidelines by ensuring that participants faced no harm or exploitation as a result of their involvement (Creswell & Creswell, 2018).

Furthermore, the research maintained objectivity and transparency in data collection and analysis to prevent bias and misrepresentation. Participants were treated with respect and dignity, acknowledging their rights to withdraw from the study at any stage without consequences. The principle of beneficence was observed by ensuring that the study's findings contributed positively

to women's empowerment and economic inclusion. Ethical approval was sought from the relevant institutional review board to uphold research standards. By adhering to these ethical principles, the study ensured credibility, accuracy, and the protection of participants' rights.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

The chapter begins with an overview of the response rate and demographic characteristics of the study participants, followed by descriptive statistics for each of the study variables: institutional lending services, saving services, microinsurance services, financial training, and women empowerment. Subsequently, diagnostic tests are presented to validate the assumptions underlying the statistical analyses, including tests for multicollinearity, heteroscedasticity, and normality. The chapter further presents correlation analysis to examine the relationships between variables and multiple regression analysis to determine the predictive power of microfinance services on women empowerment. The findings are discussed in relation to the study objectives and existing literature to provide comprehensive insights into how different components of microfinance lending contribute to the multidimensional empowerment of women in urban slum contexts. The statistical analyses were conducted using SPSS Version 25, with significance levels set at 0.05 to ensure robust and reliable conclusions.

4.1 Response Rate

The response rate is a critical indicator of the validity and reliability of survey research, as it reflects the extent to which the targeted sample participated in the study. Table 2 presents the response rate achieved in this study, showing the distribution of returned and unreturned questionnaires from the 200 women who were targeted in Nakuru County slums.

TABLE 2

Response Rate

| Response | Frequency | Percent |
|-----------------|------------------|----------------|
| Returned | 186 | 93.0% |
| Unreturned | 14 | 7.0% |
| Total | 200 | 100% |

The study achieved a response rate of 93.0%, with 186 out of 200 distributed questionnaires being completed and returned by the respondents. This represents an exceptionally high response rate that significantly exceeds the generally acceptable threshold of 70% for survey research as recommended by Mugenda and Mugenda (2013). This high response rate enhances the credibility and generalizability of the study findings, as it minimizes non-response bias and ensures adequate representation of the target population. The achieved response rate is particularly commendable given the challenges associated with data collection in informal settlements, including mobility of residents and varying levels of literacy among potential respondents.

4.2 Demographic Characteristics

Table 3 presents the demographic characteristics of the respondents who participated in the study, providing insights into the profile of women accessing microfinance services in Nakuru County slums. The demographic analysis is essential for understanding the context within which microfinance services operate and their potential impact on women empowerment.

TABLE 3**Demographic Characteristics**

| Variable | Category | Frequency | Percent |
|-------------------------------|----------------------------|------------------|----------------|
| Age Group | 18–25 years | 39 | 21.0% |
| | 26–35 years | 72 | 38.7% |
| | 36–45 years | 50 | 26.9% |
| | 46–55 years | 19 | 10.2% |
| | 56 years and above | 6 | 3.2% |
| Marital Status | Single | 51 | 27.4% |
| | Married | 115 | 61.8% |
| | Divorced | 13 | 7.0% |
| | Widowed | 7 | 3.8% |
| Educational Level | No formal education | 26 | 14.0% |
| | Primary education | 90 | 48.4% |
| | Secondary education | 57 | 30.6% |
| | Tertiary education | 13 | 7.0% |
| Employment Status | Unemployed | 20 | 10.8% |
| | Self-employed | 123 | 66.1% |
| | Employed part-time | 30 | 16.1% |
| | Employed full-time | 13 | 7.0% |
| Monthly Income (KES) | Below 5,000 | 50 | 26.9% |
| | 5,001–10,000 | 84 | 45.2% |
| | 10,001–15,000 | 39 | 21.0% |
| | 15,001–20,000 | 11 | 5.9% |
| | Above 20,000 | 2 | 1.1% |
| MFI Membership | Yes | 161 | 86.6% |
| | No | 25 | 13.4% |
| Duration of Membership | Less than 1 year | 32 | 17.2% |
| | 1–3 years | 77 | 41.4% |
| | 4–6 years | 45 | 24.2% |
| | More than 6 years | 32 | 17.2% |
| Services Accessed | Savings | 148 | 79.6% |
| | Loans | 135 | 72.6% |
| | Training/Capacity building | 97 | 52.2% |

| | | |
|----------------------------|----|-------|
| Business advisory services | 71 | 38.2% |
|----------------------------|----|-------|

The age distribution of respondents reveals that the majority of women accessing microfinance services are in their economically productive years. The largest proportion of respondents (38.7%) were aged between 26-35 years, followed by those aged 36-45 years (26.9%) and 18-25 years (21.0%). Women aged 46-55 years comprised 10.2% of the sample, while only 3.2% were above 56 years. This age distribution indicates that microfinance services predominantly attract younger and middle-aged women who are likely in their peak economic activity period, seeking financial resources to establish or expand income-generating activities.

The marital status distribution shows that married women constitute the majority of microfinance beneficiaries at 61.8%, reflecting the significant role of women in household financial management and their need for financial resources to support family welfare. Single women represented 27.4% of the respondents, indicating substantial participation of unmarried women in microfinance programs. Divorced women comprised 7.0% while widowed women accounted for 3.8% of the sample. The high representation of married women suggests that microfinance services play a crucial role in supporting household economic stability and may enhance women's bargaining power within marriage relationships.

The educational profile reveals that primary education was the most common level of education among respondents at 48.4%, followed by secondary education at 30.6%. Women with no formal education comprised 14.0% of the sample, while only 7.0% had tertiary education. This educational distribution is typical of slum populations and highlights the importance of microfinance institutions in serving women with limited formal education who may be excluded from traditional banking services. The relatively high proportion of women with primary and

secondary education suggests potential for effective utilization of financial literacy training programs.

Employment status analysis shows that self-employment dominates at 66.1%, reflecting the entrepreneurial nature of women in slum areas who engage in various informal economic activities. Part-time employment accounted for 16.1%, while unemployment stood at 10.8% and full-time employment at 7.0%. The high prevalence of self-employment indicates that microfinance services primarily serve women entrepreneurs who require capital for their small-scale businesses, supporting the premise that microfinance can enhance women's economic empowerment through entrepreneurship development.

Income distribution reveals that 45.2% of respondents earn between KES 5,001-10,000 monthly, while 26.9% earn below KES 5,000. Women earning KES 10,001-15,000 comprised 21.0%, those earning KES 15,001-20,000 represented 5.9%, and only 1.1% earned above KES 20,000. This income pattern demonstrates that microfinance services target low-income women who fall within the lower socio-economic strata, consistent with the poverty alleviation objectives of microfinance institutions. The concentration of incomes in the lower brackets underscores the potential for microfinance to improve women's economic status.

The data shows that 86.6% of respondents are members of microfinance institutions, while 13.4% are not members. This high membership rate validates the sampling strategy and confirms that the study successfully captured women who have experience with microfinance services, making their responses more credible for assessing the impact of microfinance on women empowerment.

Among MFI members, 41.4% have been members for 1-3 years, representing the largest group, followed by those with 4-6 years membership at 24.2%. Members with less than one year comprised 17.2%, while those with more than six years represented 17.2%. This distribution suggests that most women have sufficient experience with microfinance services to provide informed assessments of their impact on empowerment outcomes.

The analysis of services accessed reveals that savings services are the most popular at 79.6%, followed by loans at 72.6%. Training and capacity building services were accessed by 52.2% of respondents, while business advisory services were utilized by 38.2%. This pattern indicates that women prioritize basic financial services like savings and loans, with significant interest in capacity building, suggesting opportunities for institutions to expand their non-financial services to enhance empowerment outcomes.

4.3 Descriptive Statistics

This section presents the descriptive analysis of the study variables including institutional lending services, saving services, microinsurance services, financial training, and women empowerment. The analysis is based on responses measured using a 5-point Likert scale where strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). The descriptive statistics examine mean scores and standard deviations to understand the levels of microfinance service provision and their perceived impact on women empowerment in Nakuru County slums. The mean scores provide insights into the overall assessment of each variable, while standard deviations indicate the variability in respondents' perceptions across different aspects of microfinance services and empowerment outcomes.

4.3.1 Descriptive Statistics for Lending services

The first objective of this study was to evaluate the role of institutional lending services on the financial empowerment of women residing in the slums of Nakuru County. The study assessed the level of agreement among respondents on statements related to accessibility, affordability, product design, application processes, and impact of lending services on financial independence. The results are presented in Table 4.

TABLE 4
Descriptive Statistics for Lending Services

| Statements | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Mean | S.D |
|--|-------------------|----------|---------|-------|----------------|-------------|-------------|
| The lending services provided by financial institutions are easily accessible to women. | 12.4% | 18.6% | 16.1% | 38.5% | 14.3% | 3.24 | 1.26 |
| Interest rates on loans provided by institutions are affordable for women. | 15.2% | 24.8% | 19.9% | 31.1% | 9.0% | 2.94 | 1.23 |
| Financial institutions provide loans tailored to women's needs (e.g., business loans, personal development). | 9.3% | 16.1% | 18.6% | 42.2% | 13.7% | 3.35 | 1.19 |
| The loan application process is simple and transparent for women. | 11.2% | 20.5% | 17.4% | 37.9% | 13.0% | 3.21 | 1.22 |
| Access to lending services has improved my financial independence. | 7.8% | 12.4% | 15.5% | 45.7% | 18.6% | 3.55 | 1.16 |
| Average | | | | | | 3.26 | 1.21 |

The statement regarding accessibility of lending services to women received mixed responses with a mean score of 3.24 (SD=1.26). While 52.8% of respondents agreed or strongly agreed that lending services are easily accessible, 31.0% disagreed or strongly disagreed, with 16.1% remaining neutral. This moderate agreement suggests that while more than half of the

women find lending services accessible, there remain significant barriers for nearly one-third of potential beneficiaries, indicating room for improvement in service delivery mechanisms.

The affordability of interest rates received the lowest mean score of 2.94 (SD=1.23), indicating general disagreement with the statement. A substantial 40.0% of respondents disagreed or strongly disagreed that interest rates are affordable, while only 40.1% agreed or strongly agreed, with 19.9% remaining neutral. This finding highlights a critical challenge in microfinance lending, where high interest rates may limit women's ability to effectively utilize credit services for empowerment purposes, potentially creating debt burdens rather than economic opportunities.

Regarding loans tailored to women's needs, the responses were more positive with a mean score of 3.35 (SD=1.19). A majority of 55.9% agreed or strongly agreed that financial institutions provide loans suited to women's specific needs, while 25.4% disagreed or strongly disagreed, and 18.6% remained neutral. This suggests that microfinance institutions have made reasonable progress in designing gender-sensitive loan products that address women's particular financial requirements for business and personal development.

The loan application process received a mean score of 3.21 (SD=1.22), indicating moderate agreement. Half of the respondents (50.9%) agreed or strongly agreed that the process is simple and transparent, while 31.7% disagreed or strongly disagreed, with 17.4% remaining neutral. This mixed response suggests that while many women find the application process manageable, a significant proportion still encounters complexities that may hinder their access to credit services.

The statement about lending services improving financial independence received the highest mean score of 3.55 (SD=1.16). A substantial majority of 64.3% agreed or strongly agreed that access to lending services has enhanced their financial independence, while only 20.2%

disagreed or strongly disagreed, with 15.5% remaining neutral. This positive response indicates that despite challenges with affordability and accessibility, women who successfully access lending services experience meaningful improvements in their financial autonomy.

The overall mean score for lending services was 3.26 (SD=1.21), indicating moderate satisfaction with institutional lending services among women in Nakuru County slums. While women acknowledge that lending services contribute to their financial independence and that institutions attempt to tailor products to their needs, significant concerns remain regarding affordability of interest rates and accessibility barriers. The relatively high standard deviation suggests considerable variation in experiences, likely reflecting differences in individual circumstances, institutional policies, and service delivery quality across different microfinance providers.

4.3.2 Descriptive Statistics for Saving services

The second objective of this study was to assess how institutional saving services influence the financial empowerment of women in the slums of Nakuru County. The study evaluated respondents' perceptions regarding the effectiveness of savings services in encouraging regular saving habits, providing security, offering flexibility, supporting financial literacy, and facilitating achievement of long-term financial goals. The results are presented in Table 5.

TABLE 5**Descriptive Statistics for Saving Services**

| Statements | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Mean | S.D |
|--|-----------------------|--------------|----------------|-----------------|--------------------------|-------------|-------------|
| Saving services provided by institutions encourage women to save regularly. | 22.4% | 41.6% | 18.3% | 12.7% | 5.0% | 3.64 | 1.12 |
| Women feel secure using savings accounts provided by financial institutions. | 19.9% | 43.8% | 20.2% | 11.8% | 4.3% | 3.63 | 1.08 |
| The savings plans offered are flexible and suitable for women's financial goals. | 16.8% | 38.5% | 24.2% | 15.2% | 5.3% | 3.46 | 1.14 |
| Institutions offer financial literacy programs to help women maximize their savings. | 14.6% | 35.4% | 22.4% | 19.9% | 7.8% | 3.29 | 1.21 |
| Access to saving services has helped me achieve long-term financial goals. | 18.6% | 40.4% | 21.7% | 14.0% | 5.3% | 3.53 | 1.13 |
| Average | | | | | | 3.51 | 1.14 |

The statement on whether saving services encourage women to save regularly received the highest mean score of 3.64 (SD=1.12). A substantial majority of 64.0% agreed or strongly agreed that institutional saving services motivate regular saving behavior, while only 17.7% disagreed or strongly disagreed, with 18.3% remaining neutral. This positive response indicates that microfinance institutions have been successful in creating saving mechanisms that promote financial discipline among women in slum areas.

Regarding security of savings accounts, respondents expressed strong confidence with a mean score of 3.63 (SD=1.08). Nearly two-thirds (63.7%) of women agreed or strongly agreed that they feel secure using savings accounts provided by financial institutions, while 16.1% disagreed or strongly disagreed, and 20.2% remained neutral. This high level of trust suggests that

microfinance institutions have established credible saving platforms that provide women with confidence in the safety of their funds.

The flexibility and suitability of savings plans received a mean score of 3.46 (SD=1.14). Over half of the respondents (55.3%) agreed or strongly agreed that savings plans are flexible and suitable for their financial goals, while 20.5% disagreed or strongly disagreed, with 24.2% remaining neutral. This indicates reasonable satisfaction with the design of savings products, though the relatively high proportion of neutral responses suggests room for improvement in customizing savings plans to better meet diverse women's needs.

Financial literacy programs to maximize savings received the lowest mean score of 3.29 (SD=1.21). Half of the respondents (50.0%) agreed or strongly agreed that institutions offer adequate financial literacy programs, while 27.7% disagreed or strongly disagreed, and 22.4% remained neutral. This finding highlights a gap in financial education services, suggesting that institutions need to strengthen their capacity-building programs to help women optimize their savings strategies.

The impact of saving services on achieving long-term financial goals received a mean score of 3.53 (SD=1.13). A majority of 59.0% agreed or strongly agreed that access to saving services has helped them achieve long-term financial objectives, while 19.3% disagreed or strongly disagreed, with 21.7% remaining neutral. This positive response demonstrates that saving services contribute meaningfully to women's financial planning and goal achievement.

The overall mean score for saving services was 3.51 (SD=1.14), indicating above-average satisfaction with institutional saving services among women in Nakuru County slums. The results suggest that saving services are generally effective in promoting financial security, regular saving

habits, and long-term financial goal achievement. However, the need for enhanced financial literacy programs represents an opportunity for institutions to further strengthen the empowerment impact of their saving services.

4.3.3 Descriptive Statistics for Microinsurance Services

The third objective of this study was to examine how institutional microinsurance services contribute to the financial empowerment of women in the slums of Nakuru County. The study assessed respondents' perceptions regarding the appropriateness of insurance products for women's needs, affordability of premiums, adequacy of education about insurance benefits, effectiveness in ensuring financial security, and impact on family financial stability. The results are presented in Table 6.

TABLE 6
Descriptive Statistics for Microinsurance Services

| Statements | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Mean | S.D |
|---|----------------|-------|---------|----------|-------------------|-------------|-------------|
| Insurance services provided by institutions cater to the specific needs of women. | 13.7% | 32.3% | 26.7% | 19.9% | 7.5% | 3.25 | 1.18 |
| I find the premiums for insurance services affordable. | 11.8% | 28.6% | 23.6% | 25.2% | 10.9% | 3.05 | 1.24 |
| Women are adequately educated about the benefits of insurance services. | 9.6% | 26.4% | 24.5% | 28.3% | 11.2% | 2.95 | 1.22 |
| Insurance services provided by institutions ensure financial security in times of need. | 15.5% | 35.4% | 22.4% | 18.6% | 8.1% | 3.32 | 1.19 |
| Access to insurance services has positively impacted my family's financial stability. | 14.3% | 33.9% | 25.2% | 19.3% | 7.5% | 3.28 | 1.17 |
| Average | | | | | | 3.17 | 1.20 |

The statement regarding whether insurance services cater to women's specific needs received a mean score of 3.25 (SD=1.18). Nearly half of the respondents (46.0%) agreed or strongly agreed that insurance services address women's particular requirements, while 27.4% disagreed or strongly disagreed, with 26.7% remaining neutral. This moderate agreement suggests that while institutions have made efforts to design gender-sensitive insurance products, there is significant room for improvement in tailoring services to better meet women's unique risk profiles and needs.

Affordability of insurance premiums received a mean score of 3.05 (SD=1.24), indicating mixed perceptions. Only 40.4% of respondents agreed or strongly agreed that premiums are affordable, while 36.1% disagreed or strongly disagreed, and 23.6% remained neutral. This finding reveals a critical challenge in microinsurance delivery, where cost remains a significant barrier for many women in slum areas, potentially limiting their ability to access risk protection services.

The adequacy of education about insurance benefits received the lowest mean score of 2.95 (SD=1.22), indicating general disagreement. Only 36.0% of respondents agreed or strongly agreed that women are adequately educated about insurance benefits, while 39.5% disagreed or strongly disagreed, with 24.5% remaining neutral. This finding highlights a significant gap in financial education and awareness creation, suggesting that institutions need to invest more in educating women about the value and benefits of insurance services.

Regarding insurance services ensuring financial security during times of need, respondents expressed more positive views with a mean score of 3.32 (SD=1.19). Half of the respondents (50.9%) agreed or strongly agreed that insurance services provide financial security when needed, while 26.7% disagreed or strongly disagreed, with 22.4% remaining neutral. This suggests that

women who understand and access insurance services recognize their protective value, though a significant proportion remains skeptical about their effectiveness.

The impact of insurance services on family financial stability received a mean score of 3.28 (SD=1.17). Nearly half of the respondents (48.2%) agreed or strongly agreed that access to insurance services has positively impacted their family's financial stability, while 26.8% disagreed or strongly disagreed, with 25.2% remaining neutral. This indicates that insurance services provide meaningful benefits to families that utilize them, though uptake and awareness remain challenges.

The overall mean score for microinsurance services was 3.17 (SD=1.20), indicating below-average satisfaction compared to other microfinance services. The results reveal that while insurance services provide some benefits to women who access them, significant challenges exist regarding affordability, awareness, and education. The relatively high standard deviation indicates considerable variation in experiences and perceptions, suggesting that microinsurance services may be working well for some women while failing to reach or benefit others effectively.

4.3.4 Descriptive Statistics for Financial training

The fourth objective of this study was to investigate the role of institutional financial training in enhancing the financial empowerment of women in the slums of Nakuru County. The study evaluated respondents' perceptions regarding the availability of training programs, relevance of training content, impact on financial decision-making, enhancement of financial knowledge, and improvement in confidence levels. The results are presented in Table 7.

TABLE 7**Descriptive Statistics for Financial Training**

| Statements | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Mean | S.D |
|---|-----------------------|--------------|----------------|-----------------|--------------------------|-------------|-------------|
| Financial training programs by institutions are readily available for women. | 16.1% | 34.8% | 22.4% | 18.6% | 8.1% | 3.32 | 1.20 |
| The training content is relevant to women's financial needs and challenges. | 18.3% | 38.2% | 20.5% | 16.1% | 6.8% | 3.45 | 1.17 |
| Financial training has empowered me to make better financial decisions. | 20.8% | 41.9% | 18.6% | 13.4% | 5.3% | 3.59 | 1.13 |
| Training programs enhance women's knowledge of budgeting, saving and investing. | 19.6% | 40.4% | 19.9% | 14.6% | 5.6% | 3.54 | 1.15 |
| Financial training has improved my confidence in handling financial matters. | 21.7% | 39.1% | 19.3% | 14.0% | 5.9% | 3.56 | 1.16 |
| Average | | | | | | 3.49 | 1.16 |

The availability of financial training programs received a mean score of 3.32 (SD=1.20). Half of the respondents (50.9%) agreed or strongly agreed that training programs are readily available for women, while 26.7% disagreed or strongly disagreed, with 22.4% remaining neutral. This indicates moderate accessibility to financial training, though the significant proportion of disagreement suggests that availability varies across different institutions and locations, with some women lacking adequate access to capacity-building opportunities.

The relevance of training content to women's financial needs and challenges received a mean score of 3.45 (SD=1.17). A majority of 56.5% agreed or strongly agreed that training content addresses their specific financial requirements, while 22.9% disagreed or strongly disagreed, with 20.5% remaining neutral. This positive response suggests that institutions have made reasonable

efforts to design training curricula that address the practical financial challenges women face in slum environments.

Financial training's impact on empowering better financial decisions received the highest mean score of 3.59 (SD=1.13). A substantial majority of 62.7% agreed or strongly agreed that training has enhanced their financial decision-making capabilities, while only 18.7% disagreed or strongly disagreed, with 18.6% remaining neutral. This strong positive response indicates that financial training is effective in building women's capacity to make informed financial choices, which is fundamental to their empowerment.

The enhancement of knowledge in budgeting, saving, and investing received a mean score of 3.54 (SD=1.15). Three-fifths of respondents (60.0%) agreed or strongly agreed that training programs improve their financial knowledge, while 20.2% disagreed or strongly disagreed, with 19.9% remaining neutral. This demonstrates that training programs successfully transfer practical financial skills that women can apply in managing their personal and business finances.

The improvement in confidence for handling financial matters received a mean score of 3.56 (SD=1.16). A majority of 60.8% agreed or strongly agreed that financial training has boosted their confidence in managing financial issues, while 19.9% disagreed or strongly disagreed, with 19.3% remaining neutral. This finding highlights an important psychological dimension of empowerment, where training not only builds technical skills but also enhances women's self-efficacy in financial management.

The overall mean score for financial training was 3.49 (SD=1.16), indicating above-average satisfaction with institutional financial training services among women in Nakuru County slums. The results demonstrate that financial training is perceived as relevant, effective, and

empowering by the majority of participants. The consistently positive responses across all statements suggest that financial training represents one of the most successful components of microfinance services in contributing to women's empowerment, particularly in building both technical competencies and psychological confidence in financial management.

4.3.5 Descriptive Statistics for Empowerment of women

This section presents the descriptive analysis of the dependent variable, women empowerment, which represents the ultimate outcome that the study seeks to understand in relation to microfinance lending services. The analysis examines respondents' perceptions regarding how financial services have impacted their economic opportunities, gender equality, household decision-making roles, sense of empowerment, and overall quality of life. The results are presented in Table 8.

TABLE 8**Descriptive Statistics for Women Empowerment**

| Statements | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Mean | S.D |
|--|-----------------------|--------------|----------------|-----------------|--------------------------|-------------|-------------|
| Access to financial services has increased my economic opportunities. | 24.2% | 43.5% | 16.8% | 11.2% | 4.3% | 3.72 | 1.10 |
| The financial services offered by institutions promote gender equality. | 20.5% | 41.6% | 20.2% | 12.4% | 5.3% | 3.59 | 1.14 |
| Financial inclusion has enhanced my role in household decision-making. | 22.4% | 40.7% | 18.9% | 13.7% | 4.3% | 3.63 | 1.13 |
| I feel more empowered due to the financial services and training provided. | 25.8% | 42.2% | 17.4% | 10.6% | 4.0% | 3.75 | 1.09 |
| Financial services have contributed to improving my overall quality of life. | 26.4% | 44.1% | 15.5% | 10.9% | 3.1% | 3.80 | 1.06 |
| Average | | | | | | 3.70 | 1.10 |

The statement regarding increased economic opportunities through access to financial services received a mean score of 3.72 (SD=1.10). A substantial majority of 67.7% agreed or strongly agreed that financial services have expanded their economic opportunities, while only 15.5% disagreed or strongly disagreed, with 16.8% remaining neutral. This strong positive response indicates that women perceive microfinance services as effective tools for creating and enhancing income-generating opportunities, which is fundamental to economic empowerment.

The promotion of gender equality through financial services received a mean score of 3.59 (SD=1.14). Nearly two-thirds of respondents (62.1%) agreed or strongly agreed that institutional financial services promote gender equality, while 17.7% disagreed or strongly disagreed, with 20.2% remaining neutral. This suggests that women view access to financial services as

contributing to reducing gender disparities and creating more equitable opportunities for economic participation.

Financial inclusion's enhancement of household decision-making roles received a mean score of 3.63 (SD=1.13). A majority of 63.1% agreed or strongly agreed that financial inclusion has strengthened their role in household decision-making, while 18.0% disagreed or strongly disagreed, with 18.9% remaining neutral. This finding demonstrates that access to financial services translates into increased agency and bargaining power within households, representing a crucial dimension of women's empowerment.

The overall sense of empowerment due to financial services and training received a mean score of 3.75 (SD=1.09). An impressive 68.0% of respondents agreed or strongly agreed that they feel more empowered through access to financial services and training, while only 14.6% disagreed or strongly disagreed, with 17.4% remaining neutral. This strong agreement indicates that microfinance services are succeeding in fostering psychological empowerment and self-efficacy among women participants.

The contribution of financial services to overall quality of life improvement received the highest mean score of 3.80 (SD=1.06). A remarkable 70.5% of respondents agreed or strongly agreed that financial services have enhanced their overall quality of life, while only 14.0% disagreed or strongly disagreed, with 15.5% remaining neutral. This finding represents the most positive assessment among all empowerment indicators, suggesting that the benefits of microfinance extend beyond economic gains to encompass broader life improvements.

The overall mean score for women empowerment was 3.70 (SD=1.10), indicating high levels of perceived empowerment among women accessing microfinance services in Nakuru

County slums. The consistently positive responses across all empowerment dimensions demonstrate that microfinance services are achieving their intended objectives of enhancing women's economic opportunities, decision-making power, and overall well-being. The relatively low standard deviation suggests broad consensus among respondents regarding the empowering effects of microfinance services, with the majority experiencing meaningful improvements in their empowerment status.

4.4 Diagnostic Tests

Diagnostic tests are essential in regression analysis to ensure that the data meets the underlying assumptions required for valid statistical inference. This section presents the results of tests conducted to assess multicollinearity, heteroscedasticity, and normality of the data. These tests help validate the reliability and accuracy of the regression analysis results and ensure that the conclusions drawn from the study are statistically sound.

4.4.1 Multicollinearity Test

Multicollinearity occurs when independent variables in a regression model are highly correlated with each other, which can lead to unstable parameter estimates and inflated standard errors. The study assessed multicollinearity using Variance Inflation Factor (VIF) and tolerance values, with results presented in Table 9.

TABLE 9

Multicollinearity Test Using Tolerance and VIF

| | Collinearity Statistics | |
|-------------------------|--------------------------------|------------|
| | Tolerance | VIF |
| Lending services | 0.312 | 3.206 |
| Saving services | 0.296 | 3.381 |
| Microinsurance services | 0.326 | 3.068 |
| Financial training | 0.373 | 2.681 |

The multicollinearity test results show that all independent variables have tolerance values above 0.1 and VIF values below 10, indicating acceptable levels of multicollinearity. Lending services recorded a tolerance value of 0.312 and VIF of 3.206, while saving services had a tolerance of 0.296 and VIF of 3.381. Microinsurance services showed a tolerance of 0.326 and VIF of 3.068, and financial training had the highest tolerance of 0.373 with the lowest VIF of 2.681. According to Hair et al. (2010), tolerance values above 0.1 and VIF values below 10 indicate that multicollinearity is not a serious concern. The results demonstrate that while there is some correlation among the independent variables, which is expected given they are all components of microfinance services, the level of correlation is within acceptable limits for regression analysis. This confirms that each independent variable contributes unique variance to the model and that the regression results will not be distorted by excessive multicollinearity.

4.4.2 Test for Heteroscedasticity

Heteroscedasticity occurs when the variance of error terms is not constant across all levels of the independent variables, which can lead to inefficient parameter estimates and unreliable standard errors in regression analysis. The study employed the Breusch-Pagan/Cook-Weisberg test to assess

whether the assumption of homoscedasticity (constant variance) was violated. The results are presented in Table 10.

TABLE 10

Heteroscedasticity Results

| Breusch-Pagan / Cook-Weisberg test for heteroscedasticity | | |
|--|---|-------|
| Ho: Constant variance | | |
| Variables: fitted values of Empowerment of women | | |
| chi2(1) | = | 54.17 |
| Prob > chi2 | = | 0.062 |

The Breusch-Pagan/Cook-Weisberg test for heteroscedasticity yielded a chi-square value of 54.17 with a probability value of 0.062. The null hypothesis for this test assumes constant variance (homoscedasticity), while the alternative hypothesis suggests the presence of heteroscedasticity. With a p-value of 0.062, which is greater than the conventional significance level of 0.05, the study fails to reject the null hypothesis of constant variance. This indicates that there is insufficient evidence to conclude that heteroscedasticity is present in the model. The test results suggest that the assumption of homoscedasticity is satisfied, meaning that the variance of the error terms remains relatively constant across different levels of the fitted values of women empowerment. This finding validates the appropriateness of using ordinary least squares regression for the analysis, as the presence of heteroscedasticity would have required the use of robust standard errors or alternative estimation methods to ensure reliable statistical inference.

4.4.3 Normality Test

The normality assumption requires that the residuals of the regression model follow a normal distribution, which is essential for valid hypothesis testing and confidence interval construction in

parametric statistical analysis. The study employed the Shapiro-Wilk test to assess the normality of the study variables, with results presented in Table 11.

TABLE 11
Normality Outputs

| | Shapiro-Wilk | | |
|-------------------------|---------------------|-----------|-------------|
| | Statistic | df | Sig. |
| Lending services | 0.947 | 186 | 0.074 |
| Saving services | 0.951 | 186 | 0.062 |
| Microinsurance services | 0.954 | 186 | 0.081 |
| Financial training | 0.961 | 186 | 0.066 |
| Empowerment of women | 0.955 | 186 | 0.060 |

The Shapiro-Wilk test results indicate that all study variables satisfy the normality assumption. Lending services recorded a test statistic of 0.947 with a significance value of 0.074, while saving services had a statistic of 0.951 and significance of 0.062. Microinsurance services showed a test statistic of 0.954 with significance of 0.081, and financial training recorded the highest test statistic of 0.961 with significance of 0.066. The dependent variable, empowerment of women, had a test statistic of 0.955 and significance of 0.060. All variables demonstrated p-values greater than 0.05, indicating that the null hypothesis of normal distribution cannot be rejected at the 5% significance level. According to Pallant (2020), when the Shapiro-Wilk test yields p-values above 0.05, it suggests that the data does not significantly deviate from a normal distribution. These results confirm that the normality assumption underlying parametric statistical tests is satisfied for all study variables. The normal distribution of variables supports the validity of using multiple regression analysis and ensures that the parameter estimates, standard errors, and significance tests are reliable and accurate.

4.5 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 12.

TABLE 12

Correlation Matrix

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

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. The strength of these correlations suggests that microfinance services are meaningfully associated with women empowerment, providing preliminary evidence for the relationships that will be further examined through regression analysis.

4.6 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 slums.

TABLE 13

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 13 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.

The adjusted R^2 of 0.717 accounts for the number of predictors in the model and confirms that approximately 71.7% of the variation in women empowerment is attributable to the microfinance services after adjusting for the degrees of freedom. This indicates that the model has substantial explanatory power, with the microfinance variables accounting for more than two-thirds of the variation in empowerment outcomes. The standard error of the estimate (54.666) represents the average distance between the observed and predicted values of women empowerment, providing a measure of the precision of the model's predictions. Overall, these results suggest that the regression model is well-fitted and that microfinance services are strong predictors of women empowerment in the study context.

TABLE 14**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 14 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 regression sum of squares (1,410,906.513) represents the variation in women empowerment that is explained by the microfinance service variables, while the residual sum of squares (540,896.933) represents the unexplained variation. 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. This result allows for the rejection of the null hypothesis that none of the microfinance services influence women empowerment. The large F-value and highly significant p-value provide strong evidence that the microfinance services (lending services, saving services, microinsurance services, and financial training) collectively have a meaningful and statistically significant impact on women empowerment in Nakuru County slums. The mean square values indicate the average sum of squares, with the regression mean square (352,726.628)

being substantially larger than the residual mean square (2,988.381), further confirming the model's explanatory power.

TABLE 15

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 15 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 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.

4.7 Discussion of Findings

4.7.1 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 slums. 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 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. The positive impact on financial independence found in this study supports Lakwo (2017), who viewed microfinancing as empowering women through financial sustainability, and Cheston and Kuhn (2022), who emphasized that women become less vulnerable to poverty when they receive financial support through microfinance for income-generating activities.

4.7.2 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 slums. 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. Furthermore, the collective benefits of savings services found in this study support Andriani, Lal, and Kalam (2022), who demonstrated that women in collective savings schemes showed 31% higher levels of social empowerment and 26% greater economic independence, with 74% reporting increased community participation and 69% showing enhanced leadership capabilities.

4.7.3 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 slums, 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 slum 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 Kivalya and Caballero-Montes (2024), who found that women with access to comprehensive microinsurance packages showed 38% higher rates of business survival and 27% greater expansion of economic activities, while identifying substantial research gaps in understanding how different types of microinsurance products individually and collectively impact women's empowerment in slum settings, particularly emphasizing the need for context-specific insurance models for urban informal settlements.

4.7.4 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 slums, 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. The capacity-building effectiveness found in this study supports Parwez and Patel (2022), who determined that financial training emerged as a critical moderating factor in the microfinance-empowerment relationship, with trained women showing 41% higher empowerment scores across economic, social, and psychological dimensions, and programs combining financial education with practical business training producing the most sustainable empowerment outcomes, with 76% of participants maintaining improved financial behaviors 24 months post-training.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a comprehensive summary of the key findings from the study on microfinance lending and women empowerment in Nakuru County slums, drawing conclusions based on the analysis and discussion presented in Chapter Four. The chapter synthesizes the main research outcomes in relation to the study objectives and provides actionable recommendations for policymakers, microfinance institutions, and development practitioners. Additionally, the chapter identifies areas for future research that could further enhance understanding of the microfinance-empowerment relationship in urban informal settlements.

5.2 Summary of Findings

The first objective examined the role of institutional lending services on the financial empowerment of women in Nakuru County slums. The study found that lending services have the strongest impact on women empowerment among all microfinance components, with women experiencing significant improvements in their financial independence and economic opportunities. However, challenges persist regarding the affordability of interest rates and accessibility barriers that prevent some women from fully benefiting from these services. Women who successfully access lending services demonstrate enhanced decision-making power within households and increased capacity to invest in income-generating activities, contributing to their overall empowerment.

The second objective assessed how institutional saving services influence the financial empowerment of women in the slums. The findings revealed that saving services effectively promote financial security and encourage regular saving habits among women participants. These services provide secure platforms for wealth accumulation and help women achieve their long-term financial goals. While women express high confidence in the security of institutional savings accounts and appreciate the flexibility of savings plans, there remains a significant gap in financial literacy programs that could help women maximize the benefits of their savings.

The third objective examined how institutional microinsurance services contribute to the financial empowerment of women. The study found that microinsurance services, while contributing to empowerment, face the most implementation challenges among all microfinance components. Women who access these services experience enhanced financial security during times of need and improved family financial stability. However, significant barriers exist regarding affordability of premiums and inadequate education about insurance benefits, limiting the reach and effectiveness of these services in empowering women in slum environments.

The fourth objective investigated the role of institutional financial training in enhancing the financial empowerment of women. The findings demonstrated that financial training is highly effective in building women's capacity for financial management and enhancing their empowerment outcomes. Women who participate in training programs develop better financial decision-making skills, improved knowledge of budgeting and investing, and increased confidence in handling financial matters. The training programs are perceived as relevant to women's needs and challenges, though availability remains limited for some women seeking to access these capacity-building opportunities.

5.3 Conclusions

The study concludes that institutional lending services are the most critical component of microfinance in empowering women in Nakuru County slums, 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 slum areas in the county.

5.4 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 slums. 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 slums, 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 slum 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.

5.5 Areas for further study

Future research should conduct longitudinal studies to assess the long-term sustainability of empowerment outcomes beyond the immediate impact of microfinance services, examining how empowerment levels change over extended periods and identifying factors that contribute to sustained versus temporary empowerment gains. Comparative studies should be undertaken to evaluate the effectiveness of different microfinance delivery models, including digital versus traditional approaches, group-based versus individual lending methodologies, and formal versus informal microfinance institutions in empowering women across diverse urban and rural contexts. Additionally, research should explore the moderating effects of cultural, social, and economic factors on the microfinance-empowerment relationship, investigating how variables such as education levels, marital status, business type, and community social capital influence the effectiveness of microfinance interventions in achieving women's empowerment outcomes.

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APPENDICES

Appendix I: Letter of Introduction



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BOARD OF POSTGRADUATE STUDIES

KCAU/BPS/2025

Date: Monday, May 05, 2025

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: SARAH TIOPO LOMPO - REG NO. 15/01605

It is my distinct pleasure to introduce Sarah Tiopo Lompo, a student at our institution pursuing a Master of Science in Commerce - Finance & degree in the School of Business.

Sarah is conducting research on the topic: "*Microfinance lending and women empowerment in Nakuru county slums in Kenya*" which is part of the requirements of the program she is pursuing. The research as well as the data procured thereof shall be used for academic purposes only.

Any assistance accorded to her is highly appreciated.

In case of further inquiry, do not hesitate to contact the undersigned.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Dr. Jackson NdoLO'.

DR. JACKSON NDOLO
DIRECTOR, BOARD OF POST GRADUATE STUDIES



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **878994**

Date of Issue: **20/May/2025**

RESEARCH LICENSE



This is to Certify that Miss.. LOMPO TIOPO SARAH of KCA University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nakuru on the topic: MICROFINANCE LENDING AND WOMEN EMPOWERMENT IN NAKURU COUNTY SLUMS IN KENYA for the period ending : 20/May/2026.

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Appendix II : Questionnaire

Kindly tick the box that matches your answer to the questions and list the answers in the spaces provided appropriately.

General Questions

Section A

Age Group

18–25 years

26–35 years

36–45 years

46–55 years

56 years and above

Marital Status

Single

Married

Divorced

Widowed

Educational Level

No formal education

Primary education

Secondary education

Tertiary education (college/university)

Employment Status

Unemployed

Self-employed

Employed part-time

Employed full-time

Monthly Income Range (In KES)

- Below 5,000
- 5,001–10,000
- 10,001–15,000
- 15,001–20,000
- Above 20,000

Membership In Microfinance Institutions

- Yes
- No

Duration Of Membership In Microfinance Institutions

- Less than 1 year
- 1–3 years
- 4–6 years
- More than 6 years

Types Of Microfinance Services Accessed (Tick All That Apply)

- Savings
- Loans
- Training/Capacity building
- Business advisory services
- Primary Source of Livelihood

Section B: Institutions lending services and Financial Empowerment of Women in slums

| | | | | | |
|--|---|---|---|---|---|
| Comments on the following statement where 1 Strongly agree , 2 Agree , 3 Neutral , 4 Strongly agree, 5 Strongly disagree | | | | | |
| QUESTIONS | 1 | 2 | 3 | 4 | 5 |
| 1. The lending services provided by financial institutions are easily accessible to women. | | | | | |
| 2. Interest rates on loans provided by institutions are affordable for women. | | | | | |
| 3. Financial institutions provide loans tailored to women's needs (e.g., business loans, personal development). | | | | | |
| 4. The loan application process is simple and transparent for women. | | | | | |
| 5. Access to lending services has improved my financial independence. | | | | | |

Section C: Saving services and Financial Empowerment of Women in slums

| Comments on the following statement where 1 Strongly agree , 2 Agree , 3 Neutral , 4 Disagree , 5 Strongly disagree . | | | | | |
|--|---|---|---|---|---|
| QUESTIONS | 1 | 2 | 3 | 4 | 5 |
| 1. Saving services provided by institutions encourage women to save regularly. | | | | | |
| 2. Women feel secure using savings accounts provided by financial institutions. | | | | | |
| 3. The savings plans offered are flexible and suitable for women's financial goals. | | | | | |
| 4. Institutions offer financial literacy programs to help women maximize their savings. | | | | | |
| 5. Access to saving services has helped me achieve long-term financial goals. | | | | | |

Section D: Institutions insurance services on Financial Empowerment of Women in slums

| Comments on the following statement where 1 Strongly agree , 2 Agree , 3 Neutral , 4 Disagree , 5 Strongly disagree . | | | | | |
|--|---|---|---|---|---|
| QUESTIONS | 1 | 2 | 3 | 4 | 5 |
| 1. Insurance services provided by institutions cater to the specific needs of women. | | | | | |
| 2. I find the premiums for insurance services affordable. | | | | | |
| 3. Women are adequately educated about the benefits of insurance services. | | | | | |
| 4. Insurance services provided by institutions ensure financial security in times of need. | | | | | |
| 5. Access to insurance services has positively impacted my family's financial stability. | | | | | |

Section E: Institutions Financial training and Empowerment of Women in slums

| Comments on the following statement where 1 Strongly agree , 2 Agree , 3 Neutral , 4 Disagree , 5 Strongly disagree . | | | | | |
|--|---|---|---|---|---|
| QUESTIONS | 1 | 2 | 3 | 4 | 5 |
| 1. Financial training programs by institutions are readily available for women. | | | | | |
| 2. The training content is relevant to women's financial needs and challenges. | | | | | |
| 3. Financial training has empowered me to make better financial decisions. | | | | | |
| 4. Training programs enhance women's knowledge of budgeting, saving and investing. | | | | | |
| 5. Financial training has improved my confidence in handling financial matters. | | | | | |

SECTION F: MICROFINANCE AND WOMEN EMPOWERMENT IN SLUMS

| Comments on the following statement where 1 Strongly agree , 2 Agree , 3 Neutral , 4 Disagree , 5 Strongly disagree . | | | | | |
|--|---|---|---|---|---|
| QUESTIONS | 1 | 2 | 3 | 4 | 5 |
| 1, Access to financial services has increased my economic opportunities. | | | | | |
| 2. The financial services offered by institutions promote gender equality. | | | | | |
| 3. Financial inclusion has enhanced my role in household decision-making. | | | | | |
| 4. I feel more empowered due to the financial services and training provided. | | | | | |
| 5. Financial services have contributed to improving my overall quality of life | | | | | |