

Financial Literacy and Economic Empowerment of Women in Self-Help Groups in Kibera Sub-County, Nairobi City County, Kenya

Modesta Temba, Daniel M. Kitonga and Aloys O. Ojore

Institute for Social Transformation

Tangaza University, Nairobi, Kenya

Email: modestatemba@gmail.com

Abstract: Self-help groups are the main vehicle through which low-income women in Kenya's informal settlements save, borrow and run enterprises, yet the contribution of financial literacy to their economic empowerment has rarely been estimated statistically in urban informal settings. This study determined the impact of financial literacy on economic empowerment among women in self-help groups in Kibera Sub-County, Nairobi City County, Kenya. Anchored on Behavioral Finance Theory and Social Capital Theory, it adopted an explanatory cross-sectional survey design. Of 184 members selected from six women self-help groups ($N = 342$) through stratified proportionate sampling, 165 returned usable questionnaires (90 percent). The scales were reliable ($\alpha = .798$ and $.851$). Data were analysed using descriptive statistics, Pearson correlation and regression analysis. Financial literacy was rated high ($M = 3.65$), with peer learning highest ($M = 4.63$) and use of formal financial services ($M = 2.34$) and application of training to financial decisions ($M = 2.33$) lowest. Financial literacy had a positive and significant impact on economic empowerment ($R^2 = .672$, $\beta = .820$, $p < .001$), which remained significant after controlling for marketing, customer relations, and communication and negotiation skills ($\beta = .241$, $p = .005$). The study concludes that financial literacy drives women's economic empowerment in self-help groups, but knowledge gained from peers is not yet matched by its application in formal financial decisions. It recommends practice-based financial literacy embedded in group routines, linkage of members to suitable formal financial services, and assessment of members' actual financial practices.

Keywords: financial literacy; Economic empowerment; Women self-help groups; Behavioural finance; Informal settlements; Kibera

How to cite this work (APA):

Temba, M. Kitonga, D. M. & Ojore, A. O. (2026). Financial Literacy and Economic Empowerment of Women in Self-Help Groups in Kibera Sub-County, Nairobi City County, Kenya. *Journal of Research Innovation and Implications in Education*, 10(4), 683 – 695. <https://doi.org/10.59765/b4b2r>

1. Introduction

Economic empowerment of women has become a central concern of development policy because women who earn and control income invest more in household welfare, and because gender gaps in economic participation depress national growth (Kabeer, 1999; Sen, 1999). In this study, economic empowerment denotes the process through which women gain the capacity to earn and control income, accumulate assets, bargain collectively and take part in decisions that affect their livelihoods (Kabeer, 1999). Business skills training is among the most widely used interventions for advancing this process, and financial literacy is usually its foundation. Financial literacy refers to the knowledge and

competence required to budget, keep records, save, manage credit and use formal financial services (Lusardi & Mitchell, 2014). Human capital thinking holds that such competencies raise the productivity and earnings of those who acquire them (Becker, 1993), and international evidence shows that financial literacy is a key determinant of financial inclusion and socio-economic empowerment, particularly among low-income populations (Atkinson & Messy, 2012; Grohmann et al., 2018; Panakaje et al., 2023).

In Kenya, self-help groups are the main structure through which low-income women organise economically. Women who share similar circumstances form the groups to pool savings, access credit and support one another (Njoroge et al., 2025; Were & Kimaru-Muchai,

2021). The Government of Kenya has supported such groups through the Women Enterprise Fund, the preference for women-owned enterprises in public procurement and, more recently, a legal framework for the registration and regulation of community groups (Community Groups Registration Act, 2022). Financial literacy training has also produced visible results among women's groups: Mberia and Wachira (2021) found that budgeting and debt management training was positively and significantly related to the financial performance of women's self-help groups trained by Equity Bank in Machakos Town. In Kibera Sub-County, one of the largest informal settlements in Africa, women have organised in self-help groups for nearly two decades. Members are mostly low-income earners engaged in small trade and casual work, and many have limited formal education. Training is offered to some groups by non-governmental organisations, faith-based organisations and microfinance institutions, but it is fragmented, and women's groups in Nairobi's informal settlements have weak links with markets and external partners that limit their growth (Njoroge et al., 2025). The contribution of such training to members' economic empowerment has not been systematically measured.

Preliminary engagement with ten women's groups in Kibera, conducted through a faith-based justice and peace programme, revealed the financial dimension of the problem in concrete terms. Most members earned less than KES 5,000 a month. Women reported that they could not keep records, prepare business plans or manage loans; leaders lacked the skills to manage group finances transparently; and one group had lost approximately KES 50,000 in savings to a fraudulent land-purchase scheme. These observations are consistent with the call by Were and Kimaru-Muchai (2021), following their survey of self-help groups in Kibera Sub-County, for regular training of members in leadership and income-generating activities, and they suggest that the financial literacy available to the women had not translated into the economic empowerment it is meant to produce.

Existing Kenyan studies leave this question open. Studies of self-help groups in Nairobi's informal settlements have been descriptive (Njoroge et al., 2025; Were & Kimaru-Muchai, 2021), while those that used inferential tests estimated the effect of credit access or of bundled empowerment initiatives in peri-urban and rural counties (Kinyua & Sakwa, 2021; Muthonde et al., 2026). Studies that isolated financial literacy were conducted among individual women entrepreneurs, mostly outside Kenya (Desai et al., 2024; Kanth et al., 2026), or examined group financial performance rather than members' empowerment (Mberia & Wachira, 2021). None separated financial literacy from the other business skills delivered in the same training, and none estimated its impact on the economic empowerment of women in self-help groups in an urban informal settlement. The objective of this study was therefore to determine the impact of financial literacy on economic empowerment among women in self-help groups in

Kibera Sub-County, Nairobi City County, Kenya. The study tested the following null hypothesis:

H01: Financial literacy has no statistically significant impact on economic empowerment among women in self-help groups in Kibera Sub-County.

The study contributes by providing regression-based evidence on the financial literacy–empowerment relationship within group structures in an urban informal settlement, and by identifying, at item level, where financial knowledge fails to translate into practice. The term "impact" is used in the sense of the measured influence of financial literacy on economic empowerment estimated through regression analysis of cross-sectional data; it does not claim experimental causation. The rest of the article reviews the theoretical and empirical literature, describes the methodology, presents the results, discusses them, and closes with conclusions and recommendations.

2. Literature Review

2.1 Theoretical Framework

The study was anchored on Behavioral Finance Theory, supported by Social Capital Theory. Behavioral Finance Theory emerged from the work of Kahneman and Tversky (1979), whose Prospect Theory challenged the assumption that individuals make rational choices when facing financial decisions, and was extended to finance by Thaler (1985, 1999). The theory assumes that individuals possess bounded rationality and cannot process all available information perfectly (Simon, 1955), that financial decisions are shaped by psychological biases and emotions, and that people rely on heuristics to simplify complex choices. Its central concepts include loss aversion, overconfidence, anchoring, herd behaviour, mental accounting and financial self-efficacy (Kahneman & Tversky, 1979; Thaler, 1999). The theory provides a more realistic account of financial behaviour than traditional finance because it explains under-saving, excessive borrowing and poor investment choices (Shefrin, 2000), and it offers insights for financial education by identifying the behavioural barriers that education must overcome. It has been criticised for lacking a unified framework (Fama, 1998), for having limited predictive power (Camerer et al., 2004), and for labelling behaviour as irrational without sufficient regard to cultural and social context (Statman, 1999).

Behavioral Finance Theory is relevant to this study because it explains why financial literacy should matter for women's economic empowerment and why it may not be sufficient on its own. Financial knowledge equips women to budget, save, borrow prudently and avoid fraudulent schemes, thereby reducing the effect of biases on their decisions. At the same time, the theory predicts a gap between knowing and doing: knowledge does not

automatically translate into sound financial behaviour, particularly where income is low and irregular. The theory therefore leads to the expectation that financial literacy will be positively related to economic empowerment, while directing attention to whether members apply what they know.

Social Capital Theory, developed by Bourdieu (1986), Coleman (1988) and Putnam (1993), complements this individual-level explanation. The theory holds that social networks are resources that individuals can mobilise, that trust and reciprocity facilitate cooperation and reduce transaction costs, and that relationships provide channels for information and mutual support (Woolcock & Narayan, 2000). Its weaknesses are that networks may also reinforce exclusion and favouritism (Portes, 1998) and that it gives limited attention to individual decision-making. The theory is relevant here because self-help groups are networks through which financial knowledge is shared: members who are financially literate teach others, and group savings and lending provide a setting in which financial skills are practised. Behavioral Finance Theory thus explains how financial literacy shapes individual decisions, while Social Capital Theory explains how such literacy is acquired and reinforced within groups.

2.2 Empirical Review and Hypothesis Development

Kinyua and Sakwa (2021) examined women's community-based self-help groups, access to credit and wellbeing in Kiambu Sub-County through a quantitative survey of 130 members of eight groups and found that credit access through the groups had a positive effect on family wellbeing. In Kitui County, Muthonde et al. (2026) surveyed 402 self-help group members and found that empowerment initiatives within the groups were strongly correlated with women's economic empowerment ($r = .87$) and explained 76.2 percent of its variation, improving members' decision-making, financial management and participation in productive activities. Both studies used inferential statistics and confirmed that group-based finance and training improve women's welfare, but they examined credit access and bundled initiatives rather than financial literacy as a distinct skill and were conducted outside urban informal settlements.

Studies conducted in Nairobi's informal settlements have been descriptive. Were and Kimaru-Muchai (2021) evaluated self-help groups in Kibra Sub-County through a descriptive survey of 108 groups supplemented by key informant interviews and focus group discussions. They found that the groups pooled savings to widen credit access for vulnerable women and that leadership roles strengthened women's confidence and decision-making, and they recommended regular training in leadership and income-generating activities. Similarly, Njoroge et al. (2025) studied 73 members of seven women's self-help groups in the Viwandani informal settlement and found

that the groups sustained themselves through trust, frequent meetings and loan controls, but that weak market links and few external partnerships limited their growth. Neither study estimated the relationship between financial literacy and empowerment.

Studies that isolated financial literacy point in the same direction but were conducted outside women's group structures in urban Kenya. Mberia and Wachira (2021) found that budgeting and debt management training was positively and significantly correlated with the financial performance of 33 women's self-help groups trained by Equity Bank in Machakos Town. Desai et al. (2024), using instrumental-variable regression on data from 820 rural women entrepreneurs in India, found that financial literacy and entrepreneurial orientation raised women's economic empowerment, measured through financial well-being, even after controlling for experience, family support and social networks, while Kanth et al. (2026) found among 396 rural women entrepreneurs in Bihar that financial literacy significantly improved financial behaviour, including investment decisions. In Ghana, Asitik et al. (2026) found that participation in village savings and loan associations improved the financial literacy of 265 rural women entrepreneurs, and that financial literacy fully mediated the effect of participation on financial inclusion. Internationally, Sanyal (2009) found that women who participated in microfinance groups gained economic agency and greater decision-making authority in their households, Grohmann et al. (2018) established that higher financial literacy is associated with greater use of financial services, and a meta-analysis of 76 randomised experiments showed that financial education improves both financial knowledge and downstream financial behaviours (Kaiser et al., 2022).

Taken together, these studies converge on the view that financial knowledge, whether acquired through structured training (Desai et al., 2024; Mberia & Wachira, 2021) or through participation and peer learning within groups (Asitik et al., 2026; Were & Kimaru-Muchai, 2021), is associated with better financial and economic outcomes. They diverge in what they measure and how. The Kenyan self-help group studies either relied on descriptive statistics or examined credit access and bundled initiatives; the studies that isolated financial literacy examined individual entrepreneurs or group financial performance rather than members' empowerment; none distinguished financial literacy from other business skills delivered in the same training; and none estimated the relationship among women in self-help groups in an urban informal settlement. Drawing on Behavioral Finance Theory and this evidence, the study expected financial literacy to have a positive impact on economic empowerment and tested the null hypothesis H_01 stated in Section 1.

2.3 Conceptual Framework

Figure 1 presents the conceptual model. Financial literacy, the independent variable, was measured through participation in organised training sessions and workshops, peer learning from financially literate members, access to and use of formal financial services, and the application of training to decisions on saving, investing and avoiding debt (Lusardi & Mitchell, 2014). Economic empowerment, the dependent variable, was

measured through access to training and capacity building, enterprise capability, collective price negotiation, collective bargaining power, asset accumulation through savings and investment, and collective advocacy (Kabeer, 1999).

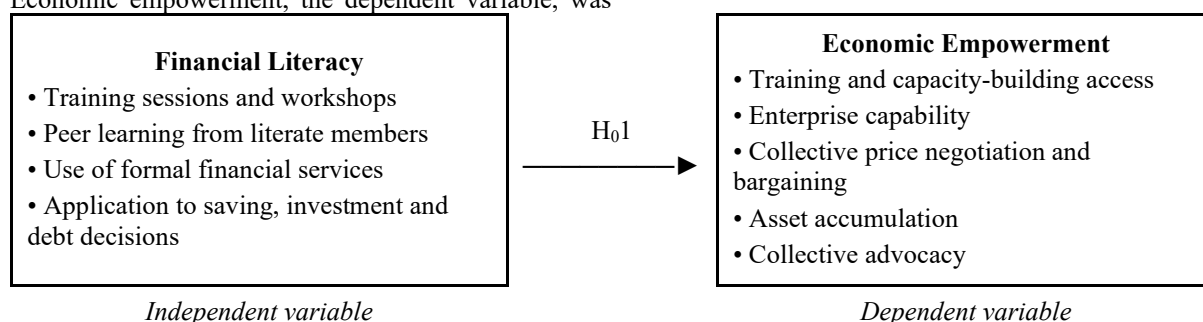


Figure 1. Conceptual model

3. Methodology

3.1 Research Philosophy and Design

The study adopted a positivist philosophy, which holds that social phenomena can be measured objectively and that relationships between variables can be established through quantitative measurement and statistical testing (Saunders et al., 2019). Consistent with this philosophy, an explanatory cross-sectional survey design was used. An explanatory design is appropriate when the purpose is to establish whether and to what extent an independent variable influences a dependent variable (Saunders et al., 2019), which required inferential analysis of data collected from a sample of women at one point in time.

3.2 Study Area, Population and Sampling

The study was conducted in Kibera Sub-County, Nairobi City County, located about 6.6 kilometres south-west of

the city centre and covering 12.1 km², including most of the Kibera informal settlement. The target population was 342 registered members of six women self-help groups. The sample size was determined using the Yamane (1973) formula at a 5 percent level of precision:

$$n = N / [1 + N(e)^2] = 342 / [1 + 342(0.05)^2] = 184$$

Stratified proportionate sampling was used, with the six groups as strata, because each group has its own leadership, savings arrangements and business activities, so that members could be expected to differ in their exposure to training and in their economic circumstances. The sample was allocated to each group using a sampling fraction of 0.538 (184 ÷ 342), as shown in Table 1. Within each group, members were selected by simple random sampling from the membership register using a random number generator; a selected member who could not be reached after two visits was replaced by the next randomly drawn number from the same group.

Table 1: Target Population and Sample Allocation

Self-help group	Population	Proportion (%)	Sample
Kibera Community Self-Help Group (KICOSHEP)	51	14.9	27
Permaco Women Self-Help Group	62	18.1	33
Gem Ugolwe Self-Help Group	55	16.1	30
Southlands Tharaka Self-Help Group	74	21.6	40
Olympic Big Tree Group	55	16.1	30
Joma Oknyal Women Group	45	13.2	24
Total	342	100.0	184

Source: Survey data (2025)

3.3 Research Instrument and Measurement

Data were collected using a researcher-developed structured questionnaire, since no standardised scale measures financial literacy and economic empowerment among women self-help group members in an urban informal settlement. Financial literacy was measured with six items derived from Lusardi and Mitchell's (2014) conceptualisation of financial literacy as the knowledge required for budgeting, saving and credit management. Economic empowerment was measured with six items informed by Kabeer's (1999) conceptualisation of empowerment as an expanded ability to make strategic economic choices. All items were rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), with no reverse-scored items. Item scores for each variable were averaged into a composite score ranging from 1.00 to 5.00, and means

were interpreted using equal intervals: 1.00–1.80 very low, 1.81–2.60 low, 2.61–3.40 moderate, 3.41–4.20 high and 4.21–5.00 very high.

3.4 Validity and Reliability

Content and face validity were established through expert review by the supervisors, who evaluated the items for clarity, relevance and alignment with the study objective; ambiguous items were reworded and items were added to ensure full coverage of each construct. The questionnaire was pre-tested among 18 members of four women self-help groups in Mathare Sub-County, an informal settlement with comparable characteristics, representing 10 percent of the sample; the pilot respondents were excluded from the main study. Reliability was confirmed with the main study data using Cronbach's alpha, with 0.70 as the minimum acceptable coefficient. Both scales exceeded the threshold (Table 2).

Table 2: Reliability Results

Variable	Number of items	Cronbach's α	Decision
Financial literacy	6	.798	Reliable
Economic empowerment	6	.851	Reliable

Source: Survey data (2025)

3.5 Data Collection

Fieldwork began after ethical clearance and a research permit had been obtained (Section 3.7). Group chairpersons granted permission to approach members and provided the membership registers used as the sampling frame. Questionnaires were administered during scheduled group meetings using the drop-and-pick method, and respondents who needed help reading the statements were assisted by the researcher, who read the statements verbatim without interpretation so as not to influence the responses. Of the 184 questionnaires issued, 165 were returned complete, a response rate of 90 percent, which is adequate for analysis and generalisation to the target population.

3.6 Data Analysis and Model Specification

Data were analysed using SPSS version 30. Descriptive statistics (means and standard deviations) summarised the items and composite scores, and Pearson's correlation established the direction and strength of the association between the variables. The hypothesis was tested using the simple linear regression model:

$$EE = \alpha + \beta_1 FL + \varepsilon$$

where EE is economic empowerment, α is the constant, β_1 is the regression coefficient of financial literacy (FL) and ε is the error term. The coefficient of determination (R^2) measured the proportion of variation in economic empowerment explained by financial literacy, the F-

statistic tested the overall significance of the model, and the t-statistic tested the coefficient. Because financial literacy was delivered alongside other business skills that were strongly correlated with it, a robustness model controlled for marketing skills (MS), customer relations skills (CR), and communication and negotiation skills (CN), each measured with a six-item scale ($\alpha = .799, .801$ and $.779$ respectively):

$$EE = \alpha + \beta_1 FL + \beta_2 MS + \beta_3 CR + \beta_4 CN + \varepsilon$$

The null hypothesis H_0 1 was rejected where $p < .05$. Both regression models were estimated on the 165 complete responses.

3.7 Ethical Considerations

The study observed the ethical principles governing research with human participants. Ethical clearance was obtained from the Tangaza University Ethics Committee, and a research permit was obtained from the National Commission for Science, Technology and Innovation (NACOSTI) before data collection began; an introduction letter from the university and permission from the chairperson of each self-help group were also obtained. Before completing the questionnaire, each respondent was informed of the purpose of the study, the procedures involved, the expected time commitment and any foreseeable risks and benefits and gave informed written consent. Participation was voluntary, and respondents were assured of their right to decline any question or to withdraw from the study at any time without any consequence.

Confidentiality and anonymity were protected throughout. No names or other personal identifiers were recorded on the questionnaires, group-level information was used only for sampling, and the results are reported in aggregate so that no individual respondent or group can be identified from them. Respondents who needed help reading the statements were assisted individually and privately to protect their dignity, and care was taken not to influence their answers. Completed questionnaires were kept securely and the electronic data were stored in password-protected files accessible only to the research team, and the data were used solely for academic purposes. All sources consulted were duly acknowledged to uphold academic integrity.

4. Results and Discussion

4.1 Profile of Respondents

Table 3 presents the education level and length of group membership of the respondents. One questionnaire that was complete on the study variables but lacked demographic information was retained for the main analysis, so the profile reports 164 cases. Most respondents had a diploma (53.7 percent) or O-level education (25.0 percent), indicating that they could comprehend and respond to the questionnaire. Most had belonged to their groups for 11 to 15 years (40.2 percent) or 16 to 20 years (30.5 percent), so they had substantial experience of group financial activities and training on which to base their responses.

Table 3: Profile of Respondents (n = 164)

Characteristic	Category	Frequency	Percent
Highest education level	Primary	4	2.4
	O-level	41	25.0
	Diploma	88	53.7
	Bachelor's degree	26	15.9
	Postgraduate degree	5	3.0
Period of membership	1–5 years	8	4.9
	6–10 years	17	10.4
	11–15 years	66	40.2
	16–20 years	50	30.5
	Over 20 years	23	14.0

Source: Survey data (2025)

4.2 Descriptive Results

Table 4 presents the descriptive results for financial literacy. Respondents rated peer learning very high: they strongly agreed that financially literate members help others in the group understand financial concepts and practices ($M = 4.63$, $SD = 0.90$). They also agreed strongly that microfinance institutions support training programmes among self-help groups ($M = 4.31$, $SD = 0.99$) and that sharing financial literacy experiences creates a supportive environment ($M = 4.23$, $SD = 1.09$), and agreed that the groups hold organised training

sessions with financial institutions ($M = 4.07$, $SD = 1.24$). In sharp contrast, respondents disagreed that members successfully navigate and use formal financial services such as bank accounts, loans, insurance and pension plans ($M = 2.34$, $SD = 1.44$) and that their understanding of training enables them to make better decisions on when to save, when to invest and how to avoid debt traps ($M = 2.33$, $SD = 1.19$). The composite mean of 3.65 indicates a high overall level of financial literacy, but one that rests on access to training and peer support rather than on the application of financial knowledge.

Table 4: Descriptive Statistics for Financial Literacy (n = 165)

Statement	Mean	SD	Level
Self-help groups carry out organised training sessions and workshops through partnerships with financial institutions	4.07	1.24	High
Financially literate members can help others in the group understand financial concepts and practices	4.63	0.90	Very high
Microfinance institutions support training programmes among self-help groups	4.31	0.99	Very high
Sharing financial literacy experiences creates a supportive environment, allowing individuals to feel understood and less isolated in their struggles	4.23	1.09	Very high
Self-help group members successfully navigate and use formal financial services such as bank accounts, loans, insurance and pension plans	2.34	1.44	Low
Understanding training elements enables members to make better financial decisions, such as when to save, when to invest and how to avoid debt traps	2.33	1.19	Low
Composite mean	3.65		High

Source: Survey data (2025)

Table 5 presents the results for economic empowerment. Respondents agreed strongly that self-help groups offer business and financial literacy training that equips women to start and manage enterprises ($M = 4.21$, $SD = 1.02$). They agreed that women can collectively negotiate better prices for their products ($M = 3.92$, $SD = 0.49$), that groups can collectively advocate for policies supporting women's economic empowerment ($M = 3.86$,

$SD = 1.29$), that collective bargaining power improves their economic prospects ($M = 3.78$, $SD = 1.28$), that groups provide training and capacity-building opportunities ($M = 3.59$, $SD = 1.25$), and that women accumulate assets through savings and investment ($M = 3.46$, $SD = 1.34$). The composite mean of 3.80 indicates a high reported level of economic empowerment, with asset accumulation the weakest dimension.

Table 5: Descriptive Statistics for Economic Empowerment (n = 165)

Statement	Mean	SD	Level
Self-help groups provide training and capacity-building opportunities for women	3.59	1.25	High
Self-help groups offer business and financial literacy training, which equips women with the knowledge and skills needed to start and manage successful enterprises	4.21	1.02	Very high
When women come together in self-help groups, they can collectively negotiate better prices for their products	3.92	0.49	High
Collective bargaining power can significantly improve their economic prospects	3.78	1.28	High
Through savings and investments, women in self-help groups can accumulate assets over time	3.46	1.34	High
Self-help groups can collectively advocate for policies and initiatives that support women's economic empowerment	3.86	1.29	High
Composite mean	3.80		High

Source: Survey data (2025)

4.3 Correlation Analysis

Pearson's correlation showed a strong, positive and statistically significant relationship between financial literacy and economic empowerment ($r = .820$, $p < .01$).

Financial literacy was also strongly correlated with the other business skills measured in the wider study: marketing skills ($r = .838$), customer relations skills ($r = .846$), and communication and negotiation skills ($r = .858$), all at $p < .01$ (Table 6). These inter-correlations

indicate that financial literacy is acquired and used alongside other business skills, which is why the robustness model in Section 4.5 controls for them.

Table 6: Correlations of Financial Literacy (n = 165)

Variable	Pearson r with financial literacy	Sig. (2-tailed)
Economic empowerment	.820**	.000
Marketing skills	.838**	.000
Customer relations skills	.846**	.000
Communication and negotiation skills	.858**	.000

** Correlation is significant at the 0.01 level (2-tailed). Source: Survey data (2025)

4.4 Regression Analysis and Hypothesis Testing

Table 7 presents the results of the simple linear regression of economic empowerment on financial literacy. Financial literacy explained 67.2 percent of the variation in economic empowerment ($R^2 = .672$, adjusted $R^2 = .670$). The model was statistically significant, $F(1, 163) = 334.56$, $p < .001$, confirming that financial

literacy is a significant predictor of economic empowerment. The standardised coefficient was positive and significant ($\beta = .820$, $t = 18.29$, $p < .001$), indicating that an increase of one standard deviation in financial literacy is associated with an increase of 0.820 of a standard deviation in economic empowerment. The null hypothesis H_{01} was therefore rejected: financial literacy has a positive and statistically significant impact on economic empowerment among women in self-help groups in Kibera Sub-County.

Table 7: Simple Linear Regression of Economic Empowerment on Financial Literacy

Predictor	R	R ²	Adj. R ²	F(1, 163)	β	t	Sig.
Financial literacy	.820	.672	.670	334.56	.820	18.29	.000

Dependent variable: economic empowerment. β is the standardised coefficient; in a single-predictor model β equals R. Source: Survey data (2025)

4.5 Robustness Check: Controlling for Other Business Skills

Because financial literacy was strongly correlated with the other business skills, the bivariate estimate may partly capture their influence. Table 8 presents the multiple regression in which financial literacy was entered together with marketing skills, customer relations skills, and communication and negotiation skills. The model explained 92.4 percent of the variation in economic empowerment ($R^2 = .924$, adjusted $R^2 =$

.922) and was statistically significant, $F(4, 160) = 486.806$, $p < .001$. Financial literacy retained a positive and statistically significant unique effect ($B = .242$, $SE = .084$, $\beta = .241$, $t = 2.877$, $p = .005$): holding the other skills constant, a one-unit increase in the financial literacy score was associated with a 0.242-unit increase in the economic empowerment score. The decision to reject H_{01} is therefore robust to the inclusion of the other business skills, although the size of the unique effect is considerably smaller than the bivariate estimate, and customer relations skills ($\beta = .419$) and marketing skills ($\beta = .299$) carried larger unique weights.

Table 8: Multiple Regression Coefficients (Robustness Model)

Predictor	B	Std. error	β	t	Sig.
(Constant)	-.579	.111		-5.212	.000
Financial literacy	.242	.084	.241	2.877	.005
Marketing skills	.282	.067	.299	4.214	.000
Customer relations skills	.672	.070	.419	9.631	.000
Communication and negotiation skills	.046	.084	.045	0.554	.580

Dependent variable: economic empowerment. $R = .961$; $R^2 = .924$; adjusted $R^2 = .922$; standard error of the estimate = .350; $F(4, 160) = 486.806$, $p < .001$. Source: Survey data (2025)

4.6. Discussion

The study found that financial literacy has a positive and statistically significant impact on economic empowerment among women in self-help groups in Kibera, explaining about two-thirds of the variation in reported empowerment on its own and retaining a significant unique effect when other business skills were held constant. The finding supports the proposition that financial knowledge is relevant to women's economic participation. It agrees with Desai et al. (2024), who found that financial literacy raised the economic empowerment of 820 rural women entrepreneurs in India, with Kanth et al. (2026), who found that it improved the financial behaviour and investment decisions of rural women entrepreneurs in Bihar, and with Panakaje et al. (2023), who found that financial inclusion and literacy were closely linked to socio-economic empowerment in rural Karnataka. Closer to the study area, it is consistent with Mberia and Wachira (2021), who linked budgeting and debt management training to better financial performance of women's self-help groups in Machakos, and with Muthonde et al. (2026), whose finding that empowerment initiatives in self-help groups explained 76.2 percent of the variation in women's economic empowerment in Kitui County is of a similar magnitude to the 67.2 percent explained by financial literacy here. It also agrees with international evidence that financial literacy promotes the use of financial services and household decision-making power (Grohmann et al., 2018; Sanyal, 2009). The study adds to this literature by confirming, with inferential evidence, the descriptive conclusions of Were and Kimaru-Muchai (2021) and Njoroge et al. (2025) that self-help groups in Nairobi's informal settlements strengthen women's economic position, and by isolating the contribution of financial literacy within them.

The most important finding, however, lies in the contrast within the financial literacy scale. Respondents strongly endorsed peer learning ($M = 4.63$), training support from microfinance institutions ($M = 4.31$) and the supportive environment created by sharing financial experiences ($M = 4.23$), yet they disagreed that members successfully use formal financial services ($M = 2.34$) or that training enables them to make better saving, investment and borrowing decisions ($M = 2.33$). Access to training and peer support should therefore not be interpreted as evidence that members translate knowledge into effective financial practice. This gap is consistent with the meta-analysis by Kaiser et al. (2022), which found that the effects of financial education on downstream financial behaviours are smaller than its effects on knowledge, and with Schoofs (2022), whose evaluation of a financial education programme for savings groups in rural Rwanda found no evidence of effects on formal savings or assets two years later. It also mirrors global evidence that women and poorer adults are the most likely to hold formal accounts that remain inactive, often because of low and irregular funds, distance and distrust

(Ozili, 2025), and evidence from an urban slum in Delhi that women and low-income residents with weak ties to institutions were the least likely to use bank accounts actively (Moro et al., 2026). The gap is further consistent with the low rating given to asset accumulation through savings and investment ($M = 3.46$) on the empowerment scale, with evidence that informal savings groups, rather than formal institutions, remain the main savings channel for low-income urban women in sub-Saharan Africa (Lukwa et al., 2022), and with the lost savings and loan management difficulties that women in Kibera described during preliminary engagement.

Behavioral Finance Theory provides a plausible explanation of this pattern. If individuals have bounded rationality and rely on heuristics (Simon, 1955; Thaler, 1999), then information delivered in training sessions will not automatically change behaviour, particularly for women whose incomes are low and irregular and for whom formal financial products may seem distant or risky. The finding therefore supports the theory's proposition that knowledge does not automatically translate into sound financial behaviour. Social Capital Theory explains the strongest item: in self-help groups, financially literate members are the main channel through which financial knowledge reaches others (Coleman, 1988; Woolcock & Narayan, 2000). This interpretation agrees with Asitik et al. (2026), who found that participation in savings groups raised women's financial literacy in Ghana, and with Namaweje and Yawe (2024), who found that training and membership of village savings and loan associations were associated with financial literacy and mobile money use among rural women in Uganda. The finding extends Social Capital Theory by indicating that bonding ties within the group transmit financial knowledge effectively, but that bridging ties to formal financial institutions, which would allow that knowledge to be used, remain weak; Njoroge et al. (2025) observed the same pattern of strong internal trust and weak external partnerships among women's groups in Nairobi's Viwandani settlement. Digital financial services may offer such a bridge, since mobile money has reduced financial exclusion among women in Nairobi (Kim, 2022) and narrowed the performance gap of women-owned enterprises in Kenya (Lemma & Mlilo, 2025). The study did not measure behavioural biases directly or test whether peer learning mediates the relationship, so these interpretations are explanations to be tested further rather than demonstrated mechanisms.

The difference between the bivariate coefficient ($\beta = .820$) and the adjusted coefficient ($\beta = .241$) also deserves attention. Financial literacy was taught and practised alongside marketing, customer relations, and communication and negotiation skills, and the very strong correlations among them ($r = .838$ to $.858$) show that much of the variation in empowerment that financial literacy explains on its own is shared with these other skills. Financial literacy remains a significant contributor, but its effect operates within a bundle of

business competencies, and training that treats it in isolation is unlikely to deliver its full benefit. This interpretation is consistent with McKenzie and Puerto (2021), whose randomised experiment found that business training for female entrepreneurs in Kenya raised their sales, profits and well-being three years later; with McKenzie's (2021) meta-analysis, which concluded that business training raises profits and sales by about 5 to 10 percent; and with Koomson et al. (2021), who found in Ghana that financial literacy training had stronger short-term effects on household consumption when combined with a women's empowerment module. Two further cautions apply. Both financial literacy and economic empowerment were self-reported on the same questionnaire, and one empowerment item refers directly to business and financial literacy training; overlapping content and a common response method may therefore inflate the strength of the association (Podsakoff et al., 2024). In addition, the cross-sectional design lacks before-and-after measurement and a comparison group, so the coefficients describe differences in reported scores within this population rather than proof that training caused changes in women's incomes or assets.

5. Conclusions and Recommendations

5.1 Conclusions

The study concludes that financial literacy has a positive and statistically significant impact on economic empowerment among women in self-help groups in Kibera Sub-County, and that this impact persists when marketing, customer relations, and communication and negotiation skills are taken into account. The null hypothesis was therefore rejected, and financial literacy merits a central place in empowerment programmes for women in informal settlements. The study further concludes that access to financial training and peer support is not equivalent to financial capability in practice: women in the groups learn financial concepts readily from one another, but they have not yet translated that knowledge into the use of formal financial services or into sound saving, investment and borrowing decisions, which is reflected in the comparatively weak accumulation of assets. Financial literacy support must therefore extend beyond explaining concepts to helping members apply them.

Two further conclusions follow. First, the unique contribution of financial literacy, although significant, is much smaller than its bivariate association with empowerment, so financial literacy yields its greatest benefit when it is developed together with marketing and customer relations skills rather than in isolation. Second, the findings support Behavioral Finance Theory's proposition that knowledge does not automatically become sound financial behaviour, and they extend Social Capital Theory by showing that the bonding ties within self-help groups are an effective channel for financial knowledge, while weak bridging ties to formal

financial institutions limit its use. Strengthening these bridging ties, rather than providing more information alone, is therefore the key to converting the financial literacy of women in self-help groups into lasting economic empowerment.

5.2 Recommendations

Based on the findings of this study, the following recommendations are made:

1. First, self-help groups, faith-based organisations, non-governmental organisations and the Nairobi City County Government should shift from awareness-based financial literacy sessions to applied, practice-based training that includes guided exercises in budgeting, transaction record-keeping, comparing borrowing terms, loan management and recognising fraudulent investment schemes, with members applying each skill to their own enterprises between sessions.
2. Second, because peer learning is the strongest channel of financial knowledge, groups should formalise it by identifying and training financially literate members as peer mentors and treasurers who support others in applying financial concepts.
3. Third, microfinance institutions, banks and SACCOs should complement training with deliberate linkage of groups and their members to suitable, low-cost formal financial products, including savings accounts, credit, insurance and pension schemes, and accompany members through their first use of these services; mobile money and digital savings and credit products should be used as an accessible entry point to these services.
4. Fourth, financial literacy should be integrated with marketing and customer relations training rather than delivered as a stand-alone module, given the strong overlap among these skills.
5. Fifth, the national and county governments should use the registration framework for community groups to channel training, affordable credit and market linkages to registered women's groups.
6. Finally, training providers should evaluate financial literacy programmes by observable practice, such as transaction records, savings balances, loan repayment and use of financial services, rather than by attendance alone.

5.3 Limitations and Suggestions for Further Research

The study relied on self-reported, cross-sectional data from six self-help groups in one sub-county, and the financial literacy and economic empowerment scales were researcher-developed. The findings are most directly applicable to the participating groups, and the causal effect of training cannot be established from this design. Future studies should use longitudinal or quasi-experimental designs with before-and-after measurement and comparison groups, measure economic empowerment through objective indicators such as income, savings, assets and control over business resources, and separate financial knowledge from financial behaviour. Further research should also test whether peer learning mediates the financial literacy–empowerment relationship, examine the role of digital financial services such as mobile money in closing the gap between financial knowledge and its application, and compare urban informal settlements with rural self-help groups.

References

- Asitik, A. J., Nunfam, V. F., Kodom, M., & Afrifa-Yamoah, E. (2026). The nexus of VSLA participation and financial inclusion among rural women entrepreneurs in Ghana. *International Journal of Social Economics*, 53(3), 450–466. <https://doi.org/10.1108/IJSE-10-2024-0834>
- Atkinson, A., & Messy, F.-A. (2012). *Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study* (OECD Working Papers on Finance, Insurance and Private Pensions No. 15). OECD Publishing. <https://doi.org/10.1787/5k9csfs90fr4-en>
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis with special reference to education* (3rd ed.). University of Chicago Press.
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood.
- Camerer, C. F., Loewenstein, G., & Rabin, M. (Eds.). (2004). *Advances in behavioral economics*. Princeton University Press. <https://doi.org/10.1515/9781400829118>
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120. <https://doi.org/10.1086/228943>
- Community Groups Registration Act, No. 30 of 2022 (Kenya). <https://new.kenyalaw.org/akn/ke/act/2022/30/eng@2022-12-31>
- Desai, A. D., Sensarma, R., & Thomas, A. (2024). Roles of financial literacy and entrepreneurial orientation in economic empowerment of rural women entrepreneurs. *Oxford Development Studies*, 52(3), 243–260. <https://doi.org/10.1080/13600818.2024.2403066>
- Fama, E. F. (1998). Market efficiency, long-term returns, and behavioral finance. *Journal of Financial Economics*, 49(3), 283–306. [https://doi.org/10.1016/S0304-405X\(98\)00026-9](https://doi.org/10.1016/S0304-405X(98)00026-9)
- Grohmann, A., Klühs, T., & Menkhoff, L. (2018). Does financial literacy improve financial inclusion? Cross country evidence. *World Development*, 111, 84–96. <https://doi.org/10.1016/j.worlddev.2018.06.020>
- Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30(3), 435–464. <https://doi.org/10.1111/1467-7660.00125>
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–291. <https://doi.org/10.2307/1914185>
- Kaiser, T., Lusardi, A., Menkhoff, L., & Urban, C. (2022). Financial education affects financial knowledge and downstream behaviors. *Journal of Financial Economics*, 145(2), 255–272. <https://doi.org/10.1016/j.jfineco.2021.09.022>
- Kanth, D., Sinha, A. R., & Mahato, J. (2026). Beyond urban boundaries: Understanding financial literacy, financial well-being and financial behaviour of rural women entrepreneurs in India. *International Journal of Social Economics*, 53(4), 654–669. <https://doi.org/10.1108/IJSE-05-2024-0434>
- Kim, K. (2022). Assessing the impact of mobile money on improving the financial inclusion of Nairobi women. *Journal of Gender Studies*, 31(3), 306–322. <https://doi.org/10.1080/09589236.2021.1884536>
- Kinyua, A. M., & Sakwa, M. M. (2021). Women community based self-help groups, access to credit and the effect on the wellbeing: A case of Kiambu Sub-County. *International Journal of Research and Innovation in Social Science*, 5(2), 377–385.

<https://ideas.repec.org/a/bcp/journal/v5y2021i2p377-385.html>

- Koomson, I., Villano, R. A., & Hadley, D. (2021). Accelerating the impact of financial literacy training programmes on household consumption by empowering women. *Applied Economics*, 53(29), 3359–3376. <https://doi.org/10.1080/00036846.2021.1878093>
- Lemma, T., & Mlilo, M. (2025). Mobile money usage and performance of women-owned enterprises: Evidence from Kenya. *Investment Analysts Journal*, 55(1), 87–107. <https://doi.org/10.1080/10293523.2025.2503099>
- Lukwa, A. T., Odunitan-Wayas, F. A., Lambert, E. V., & Alaba, O. A. (2022). Can informal savings groups promote food security and social, economic and health transformations, especially among women in urban sub-Saharan Africa: A narrative systematic review. *Sustainability*, 14(6), Article 3153. <https://doi.org/10.3390/su14063153>
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44. <https://doi.org/10.1257/jel.52.1.5>
- Mberia, C., & Wachira, K. (2021). Influence of budgeting and debt management literacy training on financial performance of Equity Bank trained women self help groups in Machakos Town, Kenya. *International Journal of Entrepreneurship and Project Management*, 6(1), 1–11. <https://doi.org/10.47604/ijepm.1378>
- McKenzie, D. (2021). Small business training to improve management practices in developing countries: Re-assessing the evidence for “training doesn't work”. *Oxford Review of Economic Policy*, 37(2), 276–301. <https://doi.org/10.1093/oxrep/grab002>
- McKenzie, D., & Puerto, S. (2021). Growing markets through business training for female entrepreneurs: A market-level randomized experiment in Kenya. *American Economic Journal: Applied Economics*, 13(2), 297–332. <https://doi.org/10.1257/app.20180340>
- Moro, D., Trentin, S., Dalla Pellegrina, L., & Landoni, P. (2026). Unlocking financial inclusion: The dynamics of bank account ownership in urban slums. *Sustainable Development*, 34(5), 6532–6557. <https://doi.org/10.1002/sd.70670>
- Muthonde, C. K., Kitonga, D. M., & Getui, M. N. (2026). Empowerment initiatives in self-help groups and women's economic empowerment in Kitui County. *American Journal of Youth and Women Empowerment*, 5(2), 12–19. <https://doi.org/10.54536/ajywe.v5i2.6942>
- Namaweje, H., & Yawe, B. (2024). Financial literacy among rural agribusiness women in Luweero District, Uganda: Implications for mobile money and village savings and loan associations. *Cogent Economics & Finance*, 12(1), Article 2387242. <https://doi.org/10.1080/23322039.2024.2387242>
- Njoroge, I. N., Soko, J. J., & Kimuru, P. (2025). Organizational practices, governance structures, and sustainability of women's self-help groups in informal settlements in Nairobi, Kenya. *Journal of the Kenya National Commission for UNESCO*, 5(1). <https://doi.org/10.62049/jkncu.v5i1.425>
- Ozili, P. K. (2025). Formal account inactivity: A global overview, causes, consequences and effect on financial inclusion. *Journal of Electronic Business & Digital Economics*, 4(2), 246–269. <https://doi.org/10.1108/JEBDE-01-2025-0003>
- Panakaje, N., Rahiman, H. U., Parvin, S. M. R., Kulal, A., & Siddiq, A. (2023). Socio-economic empowerment in rural India: Do financial inclusion and literacy matters? *Cogent Social Sciences*, 9(1), Article 2225829. <https://doi.org/10.1080/23311886.2023.2225829>
- Podsakoff, P. M., Podsakoff, N. P., Williams, L. J., Huang, C., & Yang, J. (2024). Common method bias: It's bad, it's complex, it's widespread, and it's not easy to fix. *Annual Review of Organizational Psychology and Organizational Behavior*, 11, 17–61. <https://doi.org/10.1146/annurev-orgpsych-110721-040030>
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24, 1–24. <https://doi.org/10.1146/annurev.soc.24.1.1>
- Putnam, R. D. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.
- Sanyal, P. (2009). From credit to collective action: The role of microfinance in promoting women's social capital and normative influence. *American Sociological Review*, 74(4), 529–550. <https://doi.org/10.1177/000312240907400402>
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
- Schoofs, A. (2022). Promoting financial inclusion for savings groups: A financial education

- programme in rural Rwanda. *Journal of Behavioral and Experimental Finance*, 34, Article 100662. <https://doi.org/10.1016/j.jbef.2022.100662>
- Sen, A. (1999). *Development as freedom*. Oxford University Press.
- Shefrin, H. (2000). *Beyond greed and fear: Understanding behavioral finance and the psychology of investing*. Harvard Business School Press.
- Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, 69(1), 99–118. <https://doi.org/10.2307/1884852>
- Statman, M. (1999). Behavioral finance: Past battles and future engagements. *Financial Analysts Journal*, 55(6), 18–27. <https://doi.org/10.2469/faj.v55.n6.2311>
- Thaler, R. H. (1985). Mental accounting and consumer choice. *Marketing Science*, 4(3), 199–214. <https://doi.org/10.1287/mksc.4.3.199>
- Thaler, R. H. (1999). The end of behavioral finance. *Financial Analysts Journal*, 55(6), 12–17. <https://doi.org/10.2469/faj.v55.n6.2310>
- Were, P. O., & Kimaru-Muchai, S. W. (2021). Evaluation of self-help groups in promoting women socio-economic empowerment in Kibra Sub-County, Nairobi County, Kenya. *Journal of Global Awareness*, 2(1), Article 6. <https://doi.org/10.24073/jga/02/01/06>
- Woolcock, M., & Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225–249. <https://doi.org/10.1093/wbro/15.2.225>
- Yamane, T. (1973). *Statistics: An introductory analysis* (3rd ed.). Harper & Row.