

DO ECONOMIC FACTORS AND FINANCIAL BEHAVIOUR INFLUENCE FINANCIAL LITERACY PERFORMANCE AMONG RURAL WOMEN IN UGANDA?

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ABSTRACT

Background: Lack of economic opportunities and good financial behaviour among women in rural areas are still far-reaching problems. Financial literacy performance has become more critical in supporting women empowerment especially in rural areas.

Methodology: This study investigates how economic factors and financial behaviour influence financial literacy performance among rural women in Uganda: a case study of Luweero district. Using a multi-stage sampling strategy with a cross-sectional quantitative research design, a sample of 150 rural women subsistence farmers who are also operating small businesses was selected. Multiple linear regression models were used to predict on average the expected financial literacy performances among rural women.

Results: Among the economic factors, on average women who were educated, own businesses and had ever received financial literacy training, and belonged to a village savings and loan association were expected to have financial literacy performance of 6.67 (p-value=0.024, CI=0.89-12.45), 9.83 (p-value=0.031, CI=0.92-18.72), and 6.56 (p-value=0.05, CI=-0.01-13.13) more than those that were uneducated, had no business and had never received any form of financial literacy training, and belonged to no village savings and loan association respectively. Among the financial behaviour factors, on average women who were neither economical nor spending oriented, who had maintained minimal financial records, planned and implemented a regular savings programme were expected to have financial literacy performance

of 10.34 (p-value=0.037, CI=0.63-20.05), 7.05 (p-value=0.033, CI=0.57-13.53) and 13.04 (p-value=0.000, CI=6.00-20.07) more than those who were very economical, never maintained any financial records, and did not plan and implement a regular savings programme respectively.

Conclusions and recommendations: The findings demonstrate how economic and financial behaviour factors influence financial literacy performance among rural women in Uganda. Financial education; sensitization on the relevance of village savings and loan associations (VSLA); having a saving plan contribute to the economic and social empowerment of rural women.

Keywords: Financial behaviour, Financial literacy, Financial literacy performance, Economic, Women, Rural

Introduction

In the 21st century, there is increasing availability and complexity of extensive financial products and services. Managing money has become more sophisticated among different vulnerable groups like the youth, low-income earners, poor adults, lower/less educated individuals, but particularly astonishing among women in rural areas (Garg & Singh, 2018). According to Prasad et al. (2018), Financial literacy is simply defined as a person's ability to understand, analyse, manage, and communicate personal finance matters. Generally, it is the ability to make financial informed and effective decisions regarding the use of money in someone's daily life. Every individual needs a good financial literacy level to manage his/her finances to achieve better standards of living. This calls for smart financial behaviour where someone has the skills and confidence in using financial knowledge to be able to identify when, how, where, what and why to spend, save, invest, and plan on different goods and services (Anis, 2015). Mason and Wilson (2000) define financial literacy as a "meaning-making process" in which individuals use a combination of skills, resources, and contextual knowledge to process information and make decisions with knowledge of the financial consequences of that decision. Thus, we can conclude that financial literacy uses a combination of several skills, resources, and contextual knowledge to demonstrate different ways on how information and decisions can be made based on the financial agreement that needs to be made.

Various studies (Anis, 2015; Nababan & Sadalia, 2012; Prasad et al., 2018) among others have shown that there is a positive correlation between financial literacy and financial behaviour, although the direction of causality is still unclear. These authors relate the financial behaviour to how a people treat, manage, and use financial resources available to him/her. Individuals with good financial behaviour tend to be effective when it comes to use of money: for example, making a budget, investing, save money, paying necessities on time, as well as controlling their

spending habits. Globally, financial literacy rates vary widely from country to country although the rates are majorly low in developing countries. Worldwide, only one out of three adults are financially literate. This implies that, they have knowledge of at least three out of the four financial concepts (Klapper & Lusardi, 2019). The low financial literacy rates are further fuelled by increasingly complex financial instruments that enter the market every day which requires someone to be knowledgeable enough to be able to compete with the consumer and financial market risks.

In South Asia and Sub-Saharan Africa, over 1.7 billion people still lack access to formal financial services and financial behaviours such as saving, borrowing, investment and risk management; while in East-Africa, Uganda still has the lowest financial literacy levels compared its neighbouring countries (Kass-Hanna et al., 2018). According to research by Garg and Singh (2018) , they examined the relationship between level of financial literacy and socio-economic factors such as age and income, and if there was any interrelationship between financial literacy and financial behaviour. Their results showed that financial literacy levels are still low among young people across most parts of the world, and this has become a global concern. They also observed that age and income influenced the financial literacy levels of young people and there existed an interrelationship between financial literacy and financial behaviour.

Again, Kass-Hanna et al. (2018) used data from the InterMedia Financial Inclusion Insights (FII) surveys for seven South Asian and Sub-Saharan African countries and investigated the relationship between multidimensional measures of financial literacy and resilience-building financial behaviours, including saving, borrowing, and risk management. Their findings consistently showed that both financial literacy and financial behaviour are key factors to building inclusiveness and financial resilience. Cliff and Ann (2011) analyzed the relationship between financial literacy and financial behaviour of rural women living in an Asian economy, particularly among women living in Bangkok. They used a standard financial literacy questionnaire and their results showed that saving account, budgeting, and spending-oriented skills were associated with financial literacy levels, but more sophisticated financial products were a less common among these women.

Although different studies have shown that there is a close relationship between financial behaviour and financial literacy, most of these studies have been done in different groups of women, for example, working, educated, and middle-class women. Limited or few studies have been done on the same when it comes to women in rural areas, especially in Uganda. Thus, basing on the above background, this study investigated how economic factors and financial behaviour influence financial literacy performance among rural women in Uganda: a case study of Luweero district.

Materials and Methods

Research Design

The study used a cross-sectional quantitative research design.

Study population and study area

The study population was rural women operating small businesses, for example, food vendors, tailors, shopkeepers, itinerant traders (chips sellers, maize sellers) and were subsistence farmers in Luweero District in Central Uganda who were 18 years and above. The predominant ethnic group was Baganda, and Luganda was the main local language used by the indigenous people. Luweero district has a population of 523,600 people (Uganda Bureau of Statistics, 2016; UTG, 2014). Luweero district (also spelled Luwero) is a district in Uganda's Central Region. Luweero district is bordered to the north by Nakasongola district, to the east by Kayunga district, to the southeast by Mukono district, to the south by Wakiso district, and to the west by Nakaseke district. The main economic activities are subsistence farming and small-scale business.

Sampling Techniques

In this study, a multi-stage sampling strategy was used. One sub-county out of the three sub-counties that make up Luweero district was purposively chosen at random during the first stage because it had more women operating in small business and subsistence farming. Using a systematic sampling approach, a list of households from the Local Council One (LC 1) was obtained in the second stage from records of prior surveys, which are typically kept for administrative purposes. This was useful in calculating the fixed household selection interval from a randomly chosen starting point. The third stage of selection, which was also carried out by simple random selection, involved choosing the qualified women from the chosen households based on the predetermined criteria, that is, rural women operating small business and doing subsistence farming were considered. Using Kish's formula to determine sample size (Kish, 1967), it produced a sample size of 158 with a design effect of 0.37 at a 95% confidence level. As a result, 158 women were included in the sample although only 155 participated in the interview, thereby giving the sample response rate of 98%. Women who never participated had personal social problems. For example, one mentioned having got ill and another two had family issues.

Data collection

A semi-structured questionnaire was developed and reviewed by different stakeholders to ensure that all the necessary information had been captured. Research assistants were trained to

participate in the data collection activities of the study. The questionnaire was piloted in Nakaseke district. Nakaseke district is near Luweero district and women who were operating small business and doing subsistence farming were used during the pilot phase. The pilot phase supported in improving of the semi-structured questionnaire to ensure that the right data was captured during the final data collection stage. After the effective completion of the pilot phase, the research assistants collected data between 19 and 31 August 2022 using computer-assisted personal interviews (CAPI) which utilize the Open Data Kit (ODK) software. The research assistants had experience of over 5 years in data collection techniques as well as working among rural women. The interviews were conducted in Luganda using a translated questionnaire. On average, each interview lasted between 45 and 55 minutes.

The semi-structured questionnaire was based on already developed financial literacy questionnaires such as Lusardi (2019), OECD (2011), OECD (2020), Santos and Tavares (2020), and modified according to the objectives of the study. The final questionnaire had forty questions and was divided into five sections. Section A had eight items on socio-demographics, Section B had five items on socioeconomics, Section C had ten items on individual characteristics, Section D had ten items on financial literacy performance, and Section E had eight items on knowledge of basic financial concepts. In the current research, only Section B, C, and D were considered.

The interviews were conducted between a research assistant and a woman in an open space (compound) which offered privacy and all women were assured of confidentiality. Both verbal and written consent were used during the process of data collection. The woman had to accept verbally and then sign a written consent of the same or use a thumbprint for those who did not know how to sign.

Variables and measures

Outcome variable

Financial literacy performance

Financial literacy performance is the outcome variable, scores of the financial literacy performance were based on the correct answer given by the woman under Section D of the questionnaire which were converted into percentages. Computing financial literacy performance was based on research done before by Chen and Volpe (2002), Suwanaphan (2013), Sarigul (2014), and Thapa and Nepal (2015) among others. The outcome variable is considered as a continuous variable.

Explanatory variables

Explanatory variables included socio-economic factors (education level, business ownership, ever received financial training, individual monthly income range, own business and ever received financial training, belonging to any village savings and loan association (VSLA) and financial literacy category). Under financial behavior factors women were asked if they 1) were economical/spending-oriented, 2) maintained financial records, 3) budget and track their spending, 4) maintained adequate financial records, 5) plan and implement a saving programme, and 6) agreed that there is a need to always wait for government all the time for startup capital as detailed in Table 1.

Table 1: Showing details of financial behavior factors

Variables	Coding type	Variable type
1. Economical/spending-oriented		
Neither economic nor spending-oriented	1	Nominal
Somewhat economical	2	
Somewhat spending-oriented, rarely saving money	3	
Very economical	4	
Very spending-oriented, hardly ever saving money	5	
2. Maintain financial records		
Maintain no records	1	Nominal
Maintain minimal records	2	
Maintain very detailed records	3	
3. I budget and track my spending		
Not true	1	Nominal
True	2	
4. I maintain adequate financial records		
Not true	1	Nominal
True	2	
5. I plan and implement a regular savings programme		
Not true	1	Nominal
True	2	
6. No need to wait for the government all the time for startup capital		
Disagree	1	Nominal
Agree	2	

Data analysis

Frequency distributions and multiple linear regression models were used. The significant variables were tested at 0.05 significance level. The analysis of the results was carried out with the support of R programming language R4.2.2 version.

Ethical considerations

This study received ethical review and clearance from TASO Research and Ethics Committee (approval number: TASO-2022-147). Further permission was given by the District Residence Commission (DRC), village chairpersons, village women leaders before approaching women in the community. Participation in the study was voluntary and we obtained both verbal and written consent from women and were assured of maximum confidentiality.

Results

Distribution of age and financial literacy performance

According to Table 2, on average the rural women were 38.95 years, with a minimum age of 18 and maximum age was 74. Their financial literacy performance was 62.32 on average.

Table 2: Age and financial literacy performance of rural women

Variable	Minimum	Mean	Maximum
Age in years	18	38.95	74
Financial literacy performance	10	62.32	100

Distribution of economic factors of rural women

From Table 3, the majority of the rural women 90(58.06%) had never received formal education, while those that had formal education were 65(41.94%) only. These had some primary, secondary, and tertiary education. Of these, the majority received between Shs.50,000 and Shs. 150,000 (33%), followed by those who received below Shs.50,000 (30%) and only 8 (5%) women received Shs.500,000 and above as their monthly individual income.

In addition, Table 3 shows that the majority of women had never received any form of financial training 121(78%) and only 34(22%) had ever received financial training. It is also noted that, 100(65%) of these women owned small business. Again, women who owned business and ever received financial training were 76(49.03%), while those that had no business and never received financial training were 45(29.03%). There were only 10(6.45%) women who had no business but had ever received financial training. The majority of the women, 117(75%), belonged to village savings and loan associations (VSLA) and 83(53.55%) were financially illiterate.

Table 3: Economic factors of rural women

Variable: Economic factors	Frequency (n=155)	Percentage (%)
Education level		
No formal education	90	58.06
With formal education (Primary to Tertiary)	65	41.94
Monthly individual income range		
Below Shs.50,000	47	30
Shs.50,000-Shs. 150,000	51	33
Shs.150,000-Shs.250,000	27	17
Shs.250,000-Shs.500,000	22	14
Shs.500,000 and above	8	5
Ever received financial training		
Yes	34	22
No	121	78
Own a business		
Yes	100	65
No	55	35
Own business and ever received financial training		
Own business and received financial training	24	15.48
Own business and never received financial training	76	49.03
No business but ever received financial training	10	6.45
No business, never received financial training	45	29.03

Belonging to any village savings and loan association (VSLA)		
No	30	25
Yes	117	75
Financial literacy category		
Financially illiterate	83	53.55
Financially literate	72	46.45

Distribution of financial behavior factors of rural women

Table 4: Financial behavior factors of rural women

Variable: Financial Behaviour factors	Frequency	Percentage (%)
Economical/spending-oriented		
Neither economic nor spending-oriented	42	27
Somewhat economical	62	40
Somewhat spending-oriented, rarely saving money	19	12
Very economical	24	15
Very spending-oriented, hardly ever saving money	8	5
Maintain financial records		
Maintain no records	88	57
Maintain minimal records	44	28
Maintain very detailed records	23	15
I budget and track my spending		
Not true	64	41
True	92	59
I maintain adequate financial records		
Not true	99	64
True	56	36
I plan and implement a regular savings programme		
Not true	29	19
True	126	81
No need to wait for the government all the time for startup capital		
Disagree	8	5
Agree	147	95

Table 4 shows that of 155 women, 62(40%) were somewhat economical, 42(27%) were neither economical nor spending-oriented, and only 8(5%) were very spending-oriented, or hardly ever saving money. Also, the majority of the women, 88(57%), maintained no records, 44(28%) maintained minimal records, and only 23(15%) maintained very detailed records. Again, 92(59%) of the women, budgeted and tracked their spending, 56(36%) maintained adequate financial records, 126(81%) planned and implemented a regular savings programme, and 147(95%) agreed that there was no need to wait for the government all the time to give them startup capital to set up business. They agreed that they could use the things within their environment to support them improve their standards of living -- for example, rearing of animals, keeping poultry, having kitchen gardens and doing small businesses.

Influence of economic factors on financial literacy among rural women

From Table 5, if a woman's age increases by 1 year, the average financial literacy performance will increase by 0.23 with a p-value 0.047*(CI= 0.00-0.45). Also, on average women who are educated are expected to have financial literacy performance of 6.67, more than those that are uneducated with a p-value of 0.024* (CI= 0.89-12.45). Since the p-value is less than 0.05, we conclude that education is a statistically significant factor that influences financial literacy performance among rural women. Again, women who received a monthly income range of Shs. 150,000- 250,000, and Shs. 250,000- 500,000 on average, they were expected to have a financial literacy performance of 8.64 and 9.74 more than those that received below Shs. 50,000 with a p-value of 0.043*(CI=0.29-17.00) and 0.034*(CI=0.72-16.00) respectively. Thus, individual monthly income range influences a woman's financial literacy performance.

Furthermore, Table 5 shows that, on average, women who had ever received financial literacy training are expected to have a financial literacy performance of 7.20 more than those that had never received any financial literacy training with p-value of 0.039* (CI=0.39-14.02). Again, women who own businesses and have ever received financial literacy training on average were expected to have a financial literacy performance of 9.83 more compared to women who had no business and had never received any form of financial literacy training with a p-value of 0.031*(CI=0.92-18.72); and on average, women who belonged to a village savings and loan association (VSLA) we expected to have financial literacy performance of 6.56 more compared to women who never belonged to any village savings and loan association with a p-value of 0.05* (CI= -0.01-13.13).

Table 5: Influence of economic factors on financial literacy among rural women

Variable	Estimates	Std.err	p-value	95% CI
Age in years	0.23	0.11	0.047*	0.00-0.45
Education (yes)	6.67	2.93	0.024*	0.89-12.45
Monthly individual income range				
Below Shs. 50,000 ^R				
Shs. 50,000-Shs. 50,000	0.63	3.56	0.860	-6.40-7.65
Shs. 150,000-Shs. 250,000	8.64	4.23	0.043*	0.29-17.00
Shs. 250,000-Shs. 500,000	9.74	4.56	0.034*	0.72-16.00
Shs. 500,000 and above	5.08	6.79	0.456	-8.35-18.51
Own a business (yes)	3.04	3.02	0.316	-2.93-9.00
Ever received financial training (yes)	7.20	3.54	0.039*	0.39-14.02
Own business and ever received financial training				
No business, never received financial training ^R				
Own business and received financial training	9.83	4.51	0.031*	0.92-18.75
Own business and never received financial training	2.25	3.36	0.505	-4.39-8.88
No business but ever received financial training	5.67	6.24	0.365	-6.67-18.00
Belonging to a village savings and loan association (VSLA) (yes)	6.56	3.33	0.050*	-0.01-13.13

R represents a reference category

Influence of financial behavior factors on financial literacy among rural women

From Table 6, on average, women who were neither economical nor spending-oriented were expected to have financial literacy performance of 10.34 more than those who were very economical with p-value of 0.037* (CI=0.63-20.05). Also, women who had maintained minimal financial records, on average, were expected to have financial literacy performance of 7.05 more compared to those that never maintained any financial records, with p-value of 0.033*(CI=0.57-13.53). Again, on average, women who planned and implemented a regular savings programme were expected to have financial literacy level of 13.04 more compared to those who did not plan and implement a regular savings programme with a p-value of 0.000* (CI=6.00-20.07). In addition, women who budgeted and tracked their spending, on average, they were expected to have a financial literacy performance of 6.35 more compared to women who did not budget and track their spending with a p-value of 0.010* (CI=0.63-12.08).

Table 6: Influence of financial behavior factors on financial literacy among rural women

Variable	Estimates	Std.Err	p-value	95% CI
Economical/spending-oriented				
Very economical ^R				
Somewhat economical	1.87	3.55	0.600	-5.15-8.88
Neither economical nor spending-oriented	10.34	4.91	0.037*	0.63-20.05
Somewhat spending-oriented, rarely saving money	0.12	4.55	0.979	-8.87-9.12
Very spending-oriented, hardly ever saving money	-8.21	6.86	0.233	-21.76-5.33
Maintain financial records				
Maintain no records ^R				
Maintain minimal records	7.05	3.28	0.033*	0.57-13.53
Maintain very detailed records	6.77	4.16	0.106	-1.45-14.98
I plan and implement a regular savings programme (yes)	13.04	3.56	0.000***	6.00-20.07
I budget and track my spending (yes)	6.35	2.90	0.010*	0.63-12.08
I maintain adequate financial records (yes)	6.43	2.97	0.032*	0.56-12.30

Discussion of findings

Our results show that if a woman's age increases by one year, the average financial literacy performance will increase. This can be attributed to the fact that as one ages, her logical and critical thinking increase. The exposure to different things that can increase her financial literacy performance, for example, use of different communication media such as radio, television, financial literacy books, use of internet, school and parent influence can also enable one to increase his financial literacy performance as one ages. This result is supported by Abdul Azeez and Jawed Akhtar (2021) whose work revealed that increase in age has a significant impact on developing financial awareness, knowledge, better financial attitudes, and behaviours. However, the results contradict the study done by Jayanthi and Rau (2019), which looked at the determinants of rural household financial literacy: evidence from South India where age was not significantly related to financial literacy.

Again, on average, women who are educated are expected to have financial literacy performance of 6.67 more than those that are uneducated. This could be because as one goes through different education levels, that is, from primary to tertiary or even university, a lot of knowledge can be learnt. In different schools, colleges and university curricula, different studies and courses are designed to help a student to understand financial management since it is a critical factor in one's life. In the process, wide knowledge on financial literacy is built as one advances in different education levels compared to someone who has not received any form of education training. The results are in line with the findings from Jayanthi and Rau (2019) where they found out that education was positively related to financial literacy since education increases one's enthusiasm, confidence, knowledge about personal finance as well as willingness to learn and acquire more knowledge which can be through formal education and other communication channels. The same results were registered by Ansong and Gyensare (2012).

In addition, our results show that women who received a monthly income range of Shs. 150,000-250,000, and Shs. 250,000-500,000 on average were expected to have financial literacy performance of 8.64 and 9.74 more than those that received below Shs. 50,000. This could be explained by clear planning and budgeting. Women who had above Shs.50,000 were seen to maintain records through writing down their budgets, indicating how much had been sold in their business, profits or sales made as well as the expenditures made daily. This helped them to be organized and to ensure that they maintain their businesses. With this, they were able to track very fast in case a loss was made, how and the would-be causes for the loss made in the business. The results in the current study agree with the study done by Abdul Azeez and Jawed Akhtar (2021). They reported that income significantly influenced the respondent's financial literacy. Also, Sholpan Gaisina and Lyazzat Kaidarova (2017) showed that respondents who had no income showed low scores of financial literacies compared to those with low and medium

income. Their results further revealed that there was no big difference between low- and high-income groups in terms of financial literacy.

Furthermore, this study's results revealed that women who owned businesses and had ever received financial literacy training and belonged to a village savings and loan association (VSLA) on average, were expected to have financial literacy performance of 9.83 and 6.56 more compared to women who had no business and had never received any form of financial literacy training and did not belong to any village savings and loan association respectively. This could be attributed to the fact that someone with a business and had ever had financial training was assumed to have some entrepreneurial and financial management skills such as: how, when, why, what to save, invest, compute sales made in a business, among others.

Women who belonged to VSLA were seen to be more confident in management of the VSLA scheme. The majority knew how to compute interest rates on a given loan; when to return the loan and interest to be paid; penalties of defaulting to pay a borrowed loan; and all these indicators showed that they had some knowledge of financial literacy and management skills. The results are in line with the results of Kaiser et al. (2022) that showed that, on average, financial education programmes have a positive causal treatment effect on financial awareness, financial knowledge, and financial behaviour.

Morgan and Long (2020) also stated that financial inclusion and savings are statistically significant to financial literacy. They showed that individuals with higher literacy scores were more likely to hold savings in both formal and informal forms compared to those who had lower financial literacy scores. In the current study, some of the informal saving forms considered were a woman saving in a VSLA, where the majority of the women embraced this kind of saving because they would be able to borrow money at a reasonable interest rate compared to formal institutions like banks, Sacco, and microfinance whose borrowing rates were higher. Informal saving forms usually provide a low interest borrowing rate compared to formal institutions.

Okello Apollo's study (2020) revealed that standard of living among women who were participating in Village Savings and Loan Associations (VSLAs) had improved since the money from the saving gave them the ability to pay school fees for their children and dependants; access better health care services for themselves and family members; affordability of better accommodation and food in their home using money got from VSLA; he recommended that there was need for sensitization of the village people on the importance of a village savings and loan association to its members in order for more members to join the group and the government and local authorities needed to support it or facilitate the citizens towards joining the VSLA.

Also, according to the work done by Hen Mpoano (2018), the Village Savings and Loan Association (VSLA) is one of the vehicles under the broad system of financial intermediation in many rural communities in Ghana and other developing countries, Uganda inclusive. The VSLA concept was adopted to empower vulnerable community members to build cohesion for managing their natural resources and generate financial resources for livelihood initiatives to reduce their over-dependence on natural resources which helped in building capacity of the VSLA groups on financial management to improve their savings and business activities. Furthermore, VSLAs provide different financial behaviour skills to their members: for example, maintaining financial records; how to be economically independent with spending, planning and implementing a regular savings programme; and how to budget and track spending on a daily, weekly, and monthly basis.

Conclusion

Our results showed that if a woman owned a business and had ever received financial literacy training, on average, she was expected to have 9.83 financial literacy performance compared to one that had neither had no business nor never trained in financial literacy skills. This result is a key finding as it proposes two important factors to improve financial literacy among women, that is, financial education inclusion and business ownership. Also, if a woman has some formal education, then, she is more likely to have high financial literacy performance on average. Thus, acquiring formal education is equally important in improving women's financial literacy performance levels. These key findings support the Millennium Development Goal 3: Promote gender equality and empower women. Under goal 3, the Food Agriculture Organization (FAO) recognizes the significance of advocating for full and equitable participation of women in efforts to improve food security, reduce poverty, and fuel sustainable rural development. All this can also be achieved when women are empowered with proper financial literacy skills as such enabling them to make clear financial decisions that support their families which, in the long run, improves their standards of living, hence reducing poverty at household level and supporting rural community development. FAO further stresses that equal participation of rural women in decision making processes, economic opportunities, and access to and control of resources and assets is significant (FAO, 2022). If women are equipped with financial literacy skills through formal education, and financial training skills, this improves their confidence, and they can seize different economic opportunities since they will have the skills to enable them to understand different economic situations as well have control of the resources at their disposal.

In addition, the current results showed that, on average, women who belonged to a village savings and loan association (VSLA) were expected to have financial literacy performance of 6.56 more compared to women who never belonged to any village savings and loan association. This shows the strength of teamwork and collaboration among rural women. As proposed by

Okello Apollo (2020), VSLAs improve the standards of living of rural women as they can pay their children's school fees; get access to better health care services for themselves and their families; be in position to afford reasonable accommodation; and have food in their homes. They can achieve this by getting money from the different VSLAs they belong to. VSLAs in one way support FOA in building technical capacity among member countries in supporting analyzing rural gender issues and addressing them in policy and programme development. VSLAs help in strengthening rural women's agricultural and livelihood skills; gives them skills to support equal participation in decision-making at all levels; link rural women through information and communication networks; and develop and share good practices that contribute to the economic and social empowerment of rural women (FAO, 2022).

In the same regard, women who had maintained minimal financial records; planned and implemented a regular savings programme; and women who budgeted and tracked their spending were, on average, expected to have stronger financial literacy performance compared to those that never maintained any financial records; did not plan and implement a regular savings programme; and did not budget and track their spending, respectively. Thus, financial record keeping, budgeting, having a working saving programme are key in enhancing financial literacy levels among rural women as well as different individuals in our daily lives. In business, keeping records improves the business as one can track the incomes and expenditures generated by the business and can detect in case losses occur so that business operations continue without hindrances whose causes are not known.

Recommendations

Basing on the above findings and conclusions, the researchers recommend that: there is need for financial training and education of rural women on financial literacy skills especially to those who have never received any form of personal financial literacy training. Women should be trained on different concepts of financial skills such as saving, financial behaviour, investment, how to start and sustain a business, and basic financial concepts like interest rates, inflation, compounding, sales and marketing, financial attitudes, among others. Also, educational curriculums should include financial literacy management courses or topics at different levels of education such that individuals are exposed to financial concepts.

Second, since VSLAs play an important role in empowering rural women in developing various financial literacy skills, there is need for sensitization of the rural women on the relevance of VSLAs and their benefits to members such that more women can join the existing VSLAs. Local governments, local authorities, including resident district commissioners (RDCs) need to support the local people towards joining VSLAs.

Third, record keeping, budgeting, having a working saving plan/programme are key financial behaviour skills that improve financial literacy performance. Hence, cultivating a culture of record keeping management, budgeting, and having a saving plan from family level are key to improving people's standards of living.

Consent to publish

All authors consented to the publication of the article.

Data availability statement

The dataset is available upon reasonable request from the corresponding author.

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