

International Journal of
**Poverty, Investment and
Development**
(IJPID)



CARI
Journals

THE CONTRIBUTION OF VOLUNTARY SAVINGS AND LOAN ASSOCIATIONS TOWARDS ENHANCING HOUSEHOLD FOOD SECURITY IN KOLE DISTRICT, MID-NORTH UGANDA

John Baptist Ogwal

Student – Master of Arts, Public Administration and Management, Lira University
ogwalbaptist@gmail.com

Gilbert Obici

Assistant lecturer, Discipline of Public Administration and Management, Lira University
obicigilbert@gmail.com

David Mwesigwa

Senior lecturer, Discipline of Public Administration and Management, Lira University
dmThestudysigwa@lirauni.ac.ug

Abstract

Purpose: The study examined the relationship between VSLA activities and household food security in Kole District. Specifically, the study examined the effect of VSLA on three aspects of household food security, namely availability, food access, and food stability.

Methods: The study adopted a cross-sectional design, which employed a mixed methods approach combining both quantitative and qualitative methods. A target population of 252 respondents including district and sub-county officials, VSLA leaders, and VSLA members was used. Both simple-random sampling and purposive sampling were applied to select a sample size of 148 and data were collected using self-administered questionnaires, interview guide and focus group discussions. Data was largely presented using tables. Descriptive statistics (mean, and standard deviation) and inferential statistics (correlation and regression) were used to analyse numerical data while Content analysis was used to analyse qualitative data.

Findings: The findings revealed a statistically significant positive relationship between activities of VSLA and household food security in the area of study. Also, VSLA activities yielded a significant effect on food availability ($\beta=0.721$, $P<0.05$), food accessibility ($\beta=0.609$, $P<0.05$) and food stability ($\beta=0.761$, $P<0.05$). It was decided that VSLA activities have a significant effect on household food security in Kole District, something that contributes to empirical-evidence of the association between VSLA activities and household food security.

Unique contribution of theory, practice and policy: For improved household food security, it is encouraged that Kole District Local Government should mobilise the local community to join VSLA groups so that they can access affordable capital with a view to increase their level of food production.

Key words: *VSLA, household, food security, availability, access, stability*

Introduction

The concept of food security dates back to the Palaeolithic or Old Stone Age era about 11,000 years ago which was a time in human history when foraging, hunting, and fishing were the primary means of obtaining food and their diets were dependent on the fluctuations of natural ecosystems (Liu, Bestel, Shi, Song, & Chen, 2013). In terms of gender roles, men would go for hunting and fishing as women would go for foraging. They had to worry about whether overfishing a lake would deplete a crucial food source or whether a drought would wither up important plants and if such occur, then there was a threat on food security and in order to ensure enough food production for their communities, they worked to manipulate those systems in certain ways, such as rotational hunting and gathering. This period was followed by Neolithic era which started after a prolonged period of hunting and gathering and in this period, there were introduction of many things including agriculture using rudimentary tools made out of stones and wild movement in search for food reduced. Crops were introduced intentionally or unintentionally at first and provided a stable food source for the group which ensured food security. But even so natural occurrence like thunder storm, prolonged dry spell and wild animals The were challenges to food security (Bar-Yosef, 2002).

As civilization came in force later where there were sense of institutionalization after several years of realization of the need for belonging, the concept of food security and particularly household food security came in to administrative recognition when The United Nations Conference on Food and Agriculture, convened by President Franklin D. Roosevelt at Hot Springs, Virginia, USA in May/June 1943, during the Second World War which led to the creation of the Food and Agriculture Organization, (FAO) of the United Nations Organisation (Akram-Lodhi, 2009).FAO's founding conference was organized to consider the goal of freedom from want in relation to food and agriculture'. It was recognized that 'freedom from want means a secure, an adequate, and a suitable supply of food for every man at household level (Sandesh, 2018). Its ultimate objective was defined as insuring an abundant supply of the right kinds of food for all mankind at household level. The primary responsibility for ensuring that people had the food needed for life and health lay with each nation. But each nation could fully achieve that goal only if all work together (Akram-Lodhi, 2009).

Globally, in September 2017, there was jointly launched "the State of Food Security and Nutrition in the World", marking the beginning of a new era in monitoring progress towards achieving a world without hunger and malnutrition, within the framework of the Sustainable Development Goals (SDGs). This report monitors progress towards the target of ending hunger (SDG Target 2.1) and provides an analysis of the underlying causes and drivers of observed trends. While monitoring hunger, the prevalence of severe food insecurity based on the Food Insecurity Experience Scale (FIES) introduced in the year to provide an estimate of the proportion of the population facing serious constraints on their ability to obtain safe, nutritious and sufficient food (Ibok, Osbahr & Srinivasan, 2021; Marais, Lessing & Frank, 2021). Of great concern is the finding of 2015, after a prolonged decline, the most recent estimates showed that global food insecurity is still increasing in a number of countries around the world (Davidson & Morrell, 2020; Swesi, El-Anis & Islam, 2020; Marshall & Cook, 2020; Jonah & May, 2020).

In Sub-Saharan Africa (SSA), household food insecurity has been on the increase and it is a growing concern to states institutions in Africa. It is estimated by the Food and Agriculture

Organization that the number of malnourished people in Sub Saharan Africa indicates a shoot up from 165.5 million in 1990-92 to 198.4 million in 1999-2001. This statistic corroborates with a recent study regarding the food insecurity situation in sub-Saharan African region (Saha, Behnke, Oldewage-Theron, Mubtasim & Miller, 2021). Obtainable studies reveal a similar trend in the Eastern African nation of Ethiopia (Abebe, 2021). Despite the various interventions to enhance food security in the Eastern African region, low productivity which tantamount to food insecurity is still a challenge (Kassegn & Endris, 2021). In Uganda, between December 2016 and January 2017, there was conducted household food security assessment which was concluded with the production of the Uganda emergency food security assessment report and this is conducted by a number of government Ministries, departments, agencies, as well as international agencies such as World Bank, World Food Programme, United Nations Development Programme, FAO, United Nations Children Emergency Fund (Patterson, Berrang-Ford, Lwasa, Namanya, Ford, IHACC Research Team & Harper, 2021). The main objective of the exercise was to establish the food security situation using the integrated food security Phase Classification (IPC) for Uganda for the period from January to March 2017. It is preceded by a nation-wide household food security assessment which is done in three phases using the same tool. The IPC analysis estimated 69 percent of the total population in the country as being minimally food insecure (IPC Phase 1). The analysis further reveals that 26 percent of the total population in the country is facing stressed food insecurity (IPC Phase 2). This population has minimum adequate food consumption, and are unable to afford some essential non-food expenditures just like their counterparts in Hoima district (Mwesigwa, 2021). The analysis finds that 5percent of the total population in the country is in Crisis (IPC Phase 3).

Yet, in October 2018, a joint departmental survey was done in all the six sub counties and one town council of Kole District to establish the household food security situation where a selected senior members of staffs identified from all the departments in the district were tasked with the role of administering a tool that was developed and used to interview a selected members involving leaders, and a number of community members at household level within a period of one month and they came up with a report that was adapted by the council. This survey which focused on household food security was conducted to test the contribution of Operation wealth Creation on food security at household level. The survey revealed that only 21% of the population of Kole are food secure, 23% are moderately food secure and 56% are food insecure. Nonetheless, issues such as irrigation (Okwang & Mwesigwa, 2021) were not covered in this study.

Village Savings and Loans Association (VSLA) refers to a group of people always ranging from 5-30 members from within the same vicinity who save together and take small loans from those saving groups, meet weekly and members save through the purchase of shares (Pierre, Habumuremyi, Habamenshi, & Mvunabo, 2019).The definition of VSLA adapted in this study is that it is a village banking methodology, which offers the productive poor mostly in the rural communities, the opportunity to collectively mobilize their resources under an administrative arrangements and lend to themselves with agreed interest rate on group basis so as to continuously meet their household basic needs (Okello & Mwesigwa, 2022). VSLA as a variable in this study will be characterised by autonomous and self-managing grouping, basically the poor led by the group constitution, periodic collection of money to the central pool, loan scheme to meet household needs, periodic repayment of loans with minimally agreed interest rate, sharing of interest among members on agreed formulae.

Variable two (Household Food Security) is defined by the United Nations' Committee on World Food Security, to refer to when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life. The definition of household food security adapted in this study is that it is a situation when a household has access to the food needed for a healthy life for all its members in terms of quality, quantity, safety, and culturally acceptable at all times. In this study variable, food security will be characterised by Availability of food, Access to food and food Stability at all times at the household level. By household availability of food in this study, I refer to the physical existence of food where at household level food could be from own production or bought from the local markets. Food availability is an important aspect of food security because when food is not physically present in a household, there is then clear food insecurity and malnutrition. According to Semazzi and Kakungulu (2020), household food availability requires that food has to be available in its physical form in enough quantity and good quality in every household so as to offer safeguard against food insecurity. A study by Awiti (2013) suggests that VSLA has got a direct influence on food availability. Many households do not have access to formal financial institutions and yet they need economic power for ensuring that food is available through production processes and in the event that access to formal financial services are limited, it is likely to impact negatively on food availability. However, the current gap in this situation is that there is inadequate financial access by poor local households that limits them from having food availability as the production processes and purchase of food require financial support (Abdullah, Shah, Ali, Ahmad, Din, & Ilyas, 2019).

In this study, household food security refers to a situation when all households have enough and available economic resources to obtain food in sufficient quantity, quality and diversity for a nutritious diet. According to Sandesh (2018), household food access depends mainly on the amount of household resources and on prices while, accessibility is also a question of the economic, physical, social and policy environment and changes in these dimensions may seriously disrupt production strategies and threaten food access of affected households. In a study by Masiga (2014), he realised that VSLA has direct bearing to food access and thereby food security at household level. Food access require economic power to buy food from the markets and the absence of clear financial services which can be easily accessed by the household, it can negatively impact on the level of access to food by different household. The gap here is that the economic power to venture the available markets to access food for household is lacking due to difficulty in accessing formal financial services which would otherwise give then economic capacity to acquire food (Hamad & Khashroum, 2016).

Food Stability as used in this study refers to a situation when the food supply at household level remains constant during the year and in the long-term which includes food, income and economic resources. According to Hamad & Khashroum (2016), household food stability requires that food must be present at all times in terms of availability, access and utilization without any fluctuation. In a study by Kurniawan (2016), it is realized that VSLA has got a direct bearing on household food stability because to ensure stability of food at all times there has got to be economic capacity to acquire food at the time it is needed throughout the year. The absence of a clear and easily accessible financial source is likely to impact negatively on the food security situation especially food stability at the household level. However, the gap in attaining food stability is caused when the stock produced and attained through other means are depleted, the current state of financial

incapacitation which would help in accessing more food to attain stability of food at all times of the year becomes a problem to the affected household.

Statement of the Problem

Despite several attempts by the Government of Uganda, and other non-State actors to improve household food security through interventions strategies such as; Plan for Modernisation of Agriculture, National Agricultural Advisory Services (NAADS), Community Agriculture Infrastructure Improvement Programme (CAIIP), Operation wealth Creation (OWC), Physical food supply to households at times of severe difficulties by government and other non-state actors, distribution of Agri inputs through Ministry of Agriculture, Animal Industry and Fisheries there is still rampant household food security in all regions of Uganda with eastern and northern Uganda leading (Yikii, Turyahabwe, & Bashaasha, 2017). Household food insecurity is rampant in Kole District as evidenced by the Report of the Joint Departmental Survey (2018), in six sub-counties and one town council of Kole District. The survey revealed that only 21% of the population of Kole are food secure, 23% are moderately food secure and 56% is food insecure (Kole District Production Department report, 2018). Because of the problem of food insecurity, several households adapted the VSLA model as a strategy to fight food insecurity which model seems to be gaining ground in the fight against household food insecurity. Against this background, the researcher sought to establish the link between VSLA and household food security in Kole District.

Objective of the study

This study aimed to examine the relationship between VSLA and household food security in Kole District. Specifically, the study investigated; (i) the effect of VSLA on household food Availability in Kole district; the contribution of VSLA on household food Access in Kole district; and (iii) the effect of VSLA on household food Stability in Kole district.

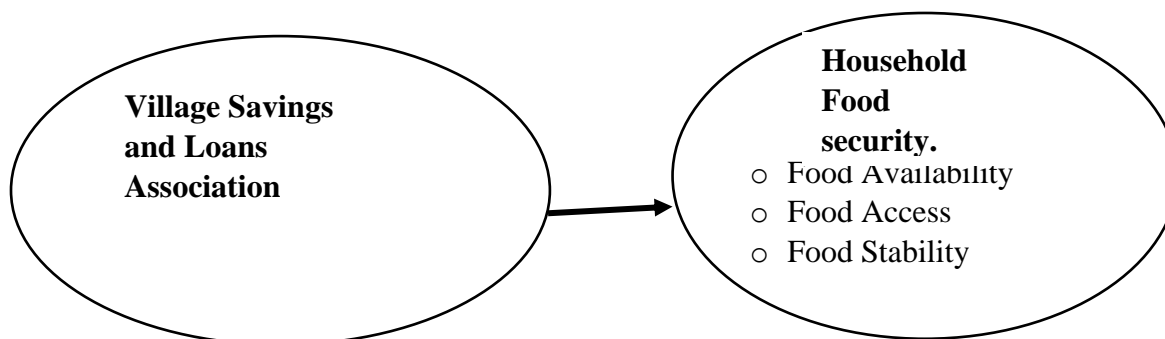


Figure 1: Showing conceptual relationship between VSLA and Household Food Security as adapted and modelled by Jabareeb 2009.

Village Savings and Loans Association was treated as the independent variable while Household Food Security was treated as the dependent variable. The role of VSLA was to be measured by the number of active VSLA groups registered in the study areas and the participation of members in each of those groupings. While the household food security situation in the study area was

measured by the average number of households having food access, food availability and food stability in the study area (Jabareen, 2009). However, there were other intervening variables that could lead to household food security, but for the purpose of this study, they had insignificant impact.

Materials and Methods

Research Design

The design of the study was cross-sectional study design. The choice of the design was to enable the researcher to collect the data at one point in time. The study employed mixed method research in data collection and management. In general, mixed method research represents research that involves collecting, analysing, and interpreting quantitative and qualitative data in a single study or in a series of studies that investigate the same underlying phenomenon (Kothari, 2011).

Target population

According to Banerjee & Chaudhury (2010), population is an entire group about which some information is required to be ascertained. This study was conducted a target population of 252. Owing to the number of each VSLA group which is 5-30 members, the above population was representative of quite a number of the groups. The population consisted of selected District leaders, selected Sub County Leaders, selected Local Council leaders and leaders and members from different VSLA groups from within Bala Town Council, Okworodot Sub County, and Aboke Sub County. This population was selected because of their roles in formation, training, registration, supervision, grievance settling, participation and beneficiary of different VSLA groups. The sample consisted of 148 respondents selected from the target population (Krejcie & Morgan, 1970) and modified using (Taherdoost & Group, 2017). The study employed Simple Random and purposive sampling techniques to select the sample. According to Ames, Glenton, & Lewin (2019), Purposive sampling is intentional selection of informants based on their ability to elucidate a specific theme, concept, or phenomenon.

Data Collection

Data were collected from both primary sources and secondary sources. Quantitative primary data was collected using questionnaire survey method, Focus group discussions and Interview guide. All institutional procedures were adhered at every level. Both validity and reliability of the instruments was ensured (Hubbard & Carriquiry (2019). Face and content validity was used to assess the validity of the instruments (Taherdoost, 2019 & Zamanzadeh et al., 2015). The content validity index (CVI). The stability of the instrument was established using a Test-retest reliability method which is the degree to which scores on the same individuals are consistent over time (Kothari, 2011) and the overall Cronbach alpha was 0.916. Data were processed (Zheng, Chen, Wang, Chen, Wang, & Luo, 2019) and entered onto the spreadsheet after which it was exported to SPSS version 23 for analysis. The study adopted univariate, bivariate and regression analysis of data.

Data presentation methods

Much of the data was presented using tables showing means and standard deviations.

RESULTS OF THE STUDY

Descriptive statistics were used to assess the contribution of VSLA activities on household food security specifically in terms of percentages, means and standard deviation. Household food security was measured in terms of food availability, food accessibility and food stability.

VSLA Activities

In order to assess the effectiveness of VSLA activities in enhancing household food security, respondents were assessed on the (10) items indicated in table 1.

Table 1: Illustrating different VSLA activities in Kole district

No	Items	M	SD
1	Whether saved money after joining VSLA to increase production	3.938	.609
2	Whether member got capital for after joining VSLA	4.010	.810
3	Whether VSLA improved household income	4.010	.699
4	Whether VSLA helped to improve the life of member	4.000	.842
5	VSLA helped to increase to increase food availability	4.000	.630
6	Whether VSLA helped to improve the quality of food at home	3.907	.891
7	Whether VSLA helped members to acquire more land	3.866	.953
8	Whether VSLA helped members to feed their families	4.052	.528
9	I have been in position to acquire business skill after joining VSLA	3.979	.777
10	Whether VSLA helped members to produce varieties of food crops	4.021	.595
Aggregated Statistics		3.978	.733

Source: Primary Data (2022)

Table 1 above shows that the overall mean of VSLA activities is 3.978, which indicates that the average performance of VLA activities in improving household food security was above average. This suggests that the VSLA activities aid in enhancing household food security. The standard deviation of .733 suggested heterogeneity in the views of respondents.

Food availability

In order to assess the scale of food availability among households in the study because of VSLA activities.

Table 2: Descriptive statistics on food availability

No	Items	M	SD
1	Whether the family can afford three meals in a day	4.134	.424
2	Whether members has right quantity of food at home all the time	3.948	.619
3	Whether the family is able to get enough food at all times	3.990	.637
4	Whether the family is sure of the availability of food throughout the year	3.907	.737
5	My family is currently able to afford any type of food	3.990	.970
Overall		3.994	.677

Source: Primary Data (2022)

The results in table 2, revealed an overall mean of approximately 3.994 suggesting consensus on the level of food availability among VSLA members being good. The Standard Deviation of .677 indicated convergence in the views of the respondents.

Food accessibility

In order to assess food access among members of VSLA, respondents were assessed on the following five (5) items indicated in table 4.11.

Table 3: Descriptive statistics on Food Accessibility

No	Items	M	SD
1	My family is in position to get food at all times	3.969	.652
2	The family is able to get the diet it needs	3.990	.604
3	My family is always in position to get the right quantity of food it needs	4.072	.617
4	My family always get the right quality of food	4.062	.592
5	All my family members are currently in position the type of food they need	3.979	.612
Aggregated Statistics		4.014	.615

Source: Primary Data (2022)

The descriptive statistics in Table 3 reveal that majority of the respondents agreed that their family was able to access food at all times (80.4%), only 2.1% disagreed. On the overall, the mean of 4.014 suggested that the respondents agreed with the view that the level of food accessibility was very good. The Standard Deviation of .615 indicated convergence in the responses.

Food Stability

In order to assess the level of food stability among VSLA member, respondents were assessed on the following five (5) items.

Table 4: Descriptive statistics on Food Stability

No	Items	M	SD
1	Whether the family is not scared of experiencing food shortage in future	4.000	.577
2	Whether the family is sure of having three meals in a day	4.206	.576
3	Whether the family has secured enough food stock that can reach the next harvest	3.948	.667
4	Whether the family is sure having diet throughout	3.854	.696
5	Whether the family members are sure of the right quantity and quality of food at all times	3.948	.683
Aggregated Statistics		3.991	.640

Source: Primary Data, 2022

The results on table 4 reveals on overall mean of 3.991 suggesting that the respondents agreed that the level of food stability was very good among VSLA members. However, the Standard Deviation of .640 revealed convergence in the respondents' views.

Bivariate Analysis between VSLA Activities and Food Security

In order to test the relationship between VSLA activities and household food security, a correlation was run. The results are presented in Table 5.

Table 5: Pearson's pairwise correlation matrix for VSLA and food security

		(1)	(2)	(3)	(4)
(1) VSLA Activities	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	97			
(2) Food availability	Pearson Correlation	.751**	1		
	Sig. (2-tailed)	.000			
	N	97	97		
(3) Food accessibility	Pearson Correlation	.641**	.718**	1	
	Sig. (2-tailed)	.000	.000		
	N	97	97	97	
(4) Food stability	Pearson Correlation	.714**	.791**	.783**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	97	97	97	97

Notes: ** Correlation is significant at the 0.05 level, that is, $**p < 0.05$ level (2-tailed)

The results on table 5 reveals a positive significant relationship between VSLA activities and food security in Kole district ($r = .751, p < .05$). This suggests that improvement in VSLA activities by a single unit, will result into a positive change in the availability of food in the household of VSLA members in Kole District. The results also reveals that there is a positive significant relationship between VSLA activities and food availability ($r = .641, p < .05$) implying that an improvement in VSLA activities leads to a positive change in the accessibility of food in the household of VSLA members in Kole District. Furthermore, a strong positive significant relationship is noticeable between VSLA activities and food stability ($r = .714, p < .05$) which means that any positive change in VSLA activities leads to a positive change in the availability of food in the household of VSLA members in Kole District. The findings from Table 5 are in agreement with the results of Masiga (2014) whose study found out that VSLA was significantly correlated with food security in Sembabule District. This is also consistent with the views of a key informant who noted that;

'The local community who have joined VSLA are now producing enough food for their families using the money they get inform loan. This is helping to improve on the level of their household food security'.

Regression analysis on VSLA Activities and Household Food Security in Kole District

A simple linear regression was conducted and the results on each of the three constructs of the study.

Empirical results on VSLA activities and Food availability

The first construct covered the effect of VSLA activities on food availability, from the linear regression, the finding indicated the outcomes on table 6 below.

Table 6: Model summary for regression

Model	R	R-Square	Adjusted R-Square	Std. Error
1	.751 ^a	.564	.560	.29823

a. Predictors: (Constant), VSLA activities

b. Dependent Variable: Food availability

The model summary in Table 6 yielded an Adjusted R-Square of .560, which meant that VSLA activities contributed approximately 56% to food availability among members of VSLA in Kole District. The remaining 44% was contributed by other factors outside the scope of the study. The coefficient of the regression was also determined in this study and the results are shown in Table 7.

Table 7: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.125	.260		4.321	.000
	VSLA activities	.721	.065	.751	11.094	.000

a. Dependent Variable: Food availability

The finding in table 7 indicated that VSLA activities had a regression coefficient of 0.721 which is significant at 5% level of confidence. This suggested that VSLA activities had a significant effect on food availability among the households of VSLA members in Kole District. This result is in support of the opinion generated from a key informant who noted that;

'Being in VSLA has made us to be in position to get capital for our business and we are not in position to buy enough food for our family. Out are now in position to afford to buy diet for our family'. And another informant was emphatic that;

'The community members who have joined VSLA have been in position to acquire capital for their business and many of them have increased their level of production'

During a Focus Group Discussion, it was noted that;

'Majority of the members joined VSLA in order to be in position to get capital to put in their businesses and farming activities. Majority also indicated that after joining VSLA, they have been in position to provide more food for their families'

The finding is consistent with that of Masiga,(2014), who found in his study that VSLA activities he had a significant effect of the level of food availability in the household. The finding also concurs with that of Awiti, (2013), whose study found out that the involvement of the local community help to enhance the ability of the members to produce a lot of food. The study therefore concluded that VSLA activities had a significant effect on the availability of food in the household. The finding also supports a study by Awiti (2013), which revealed that VSLA has got a direct influence on food availability.

Empirical results on VSLA activities and Food Accessibility

In order to determine the effect of VSLA activities on food accessibility in Kole district, a simple linear regression analysis was conducted and the results are summarised on table 8 below.

Table 8: Model summary for regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.641 ^a	.411	.405	.34292

a. Predictors: (Constant), VSLA activities

The model summary in Table 8 shows an Adjusted R-Square of .405 which suggests that approximately 40% of the variations in food accessibility in the household of VSLA members can be explained by VSLA activities. Finally, a t-test for VSLA activities and food accessibility was also performed and the results are shown in table 9 below.

Table 9: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.591	.299		5.316	.000
VSLA Activities	.609	.075	.641	8.149	.000

a. Dependent Variable: Food Accessibility

The findings in table 9 indicated that VSLA activities had a correlation coefficient of 0.609 which is significant at 5% level of confidence. This suggested that VSLA activities had a significant effect on food accessibility in the households of VSLA members in Kole District. This result is in support of the views generated from a key informant who noted that;

'Being in VSLA has made us to be in position to get capital for our business and we are not in position to get food for the family at any time since the business is now doing well. We are now in position to get food either from our gardens because the study has increased the level of production or to even buy from the market because the study is now getting money from our business. A separate key informant indicated that; 'VSLA have empowered members who are under and it has made them to have the capacity to be in position of accessing the kind of food they want including getting access to diet'

During a Focus Group Discussion with the members of a VSLA, it was suggested that; *'VSLA has changed our life financially as a result of the loan that we get. This has made members to have the ability of getting the type of food they want for the family. The money we get from VSLA has improved the level of our businesses and farming. Our family income has also improved and that is why we are now in position to afford to buy the type of food the family wants'*.

The finding approves with Abbade (2017) whose study concluded that VSLA activities help in enhancing the economic ability of individual households in order for them to acquire adequate food for the household members without running into scarcity. The study concluded that VSLA activities had a significant effect of food accessibility among individual households. This finding was consistent with those of Ksoll, Lilleør, Lønborg, and Rasmussen (2016) whose study suggested that involvement in VSLA activities had a significant effect on the ability of a household

to access adequate food. The study revealed that taking part in VSLA activities can empower a participant economically hence empowering them to have access to food for their family. The result of the study supports that of Masiga (2014), whose study suggested that VSLA has a direct bearing on food accessibility and hence food security at household level.

Empirical Results on VSLA Activities and Food Stability

In order to determine the effect of VSLA activities on food stability among members of VSLA in Kole District, a simple linear regression was run. The results from the model summary of regression are shown on Table 10.

Table 10: Model Summary for Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714 ^a	.510	.505	.35146

a. Predictors: (Constant), VSLA activities

Table 10 above reveals that the model summary of the regression test produced an Adjusted R-Square of .505, which suggested that VSLA activities contributed approximately half of the variation to the food stability among members of VSLA members in Kole District. The remaining percentage was contributed by other factors outside the scope of this study. Furthermore, a t-test was carried to draw out the statistical significance between VSLA activities and food stability (see table 11 below).

Table 11: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.963	.307		3.140	.002
	VSLA Activities	.761	.077	.714	9.939	.000

a. Dependent Variable: Food Stability

The finding in table 11 indicated that VSLA activities had a correlation coefficient of 0.761 which is significant at 5% level of confidence. This suggested that VSLA activities had a significant effect on food stability in the households of VSLA members in Kole District. This result is in support of the views raised by a key informant who held that;

'The study are currently not worried that our family may experience food shortage because VSLA has empowered us economically and are now in position to stock enough food that can even take to the next season. The study have also increased on the level of production and this is helping us to have enough food for our families'. A different informant added that;

'VSLA have made most of the member to increase their level of food production. Most of them are now in position to produce food that can take them up to the next season of production'

During a Focus Group Discussion, it was noted that;

'The study have put the issue of enough food for the family as a priority. The money that The study get from VSLA has made most of us to be in position to increase on the level of food production.'

The study are now producing enough food that can feed the family up the new season of farming. The study even produce the quantities that we can sell'.

The findings are consistent with those of Brunie, Fumagalli, Martin, Field, & Rutherford, (2014) whose study revealed that the VSLA model can be a medium-term solution to food volatility among the rural poor who have limited access to formal financial services. The finding likewise agreed with Kurniawan (2016) whose study indicated a direct bearing VSLA and household food stability because of the sustainable stability of food throughout the year.

Conclusion

From the findings of the study, it is concluded that VSLA activities have a significant effect on food availability; and active involvement in VSLA activities help to improve on the availability of food in the individual household. Further, it was found that VSLA activities had a significant effect on accessibility of food in the households of members; as a consequence, if people at the grass root get involved in VSLA activities, it will help to enhance food accessibility at the household. Also, VSLA activities had a significant effect on food stability in the household; consequently, the community should get involved in VSLA activities so that they can be in position to improve on the level of food stability in their households.

Recommendations

Based on the findings of this study, it is encouraged that:

- a) Both political and local leaders should mobilise the community members to join VSLA so that they can be in position to improve on the level of household food security.
- b) Government needs to recognize that poor people need a range of financial services not just savings and credit, given that their incomes are low, unpredictable and irregular.
- c) Government needs to enhance women's ability to access better markets.
- d) Local governments need to enhance women's ability that in most cases makes up the majority of the group members to fulfil their roles as bread winners and businesswomen by improving women's access to resources, technology and information.

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