

The contribution of international non-governmental organization on improvement of food security in rural area of Rwanda, a case of Catholic Relief Services Rwanda in Kayonza District

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ABSTRACT

Poor economic performance has led to increased absolute poverty; people without adequate food and nutrition, inadequate access to basic services, education, health facilities, safe water and decent housing. In spite of the assumption that NGOs have an important contribution to make in the improvement of food security in Rwanda, citizens as well as the government are beginning to question the exact contributions these organizations are making in development. Whereas public opinion is often mixed regarding the effectiveness of these organizations, large sums of money continue to be invested by NGOs to improve living standards. Regrettably, hunger is somehow still persisting in the district, with the malnutrition level consistently remaining as high as 30% among children less than five years, and the poverty incidences are not declining neither.

The study entitled “Contribution of international non-governmental organizations on improvement of food security in rural area of Rwanda, a case of catholic relief services Rwanda in Kayonza District” is guided by three specific objectives: to determine the core types of food-security-related activities carried out by Catholic Relief Services Rwanda (CRS); to analyze the level of improvement of food security due to Catholic Relief Services Rwanda (CRS), and to find out the relationship between activities of Catholic Relief Services Rwanda (CRS) and improvement of food security of its beneficiaries in Kayonza District. The study used descriptive and correlation research design. The sample size of the study is 377 beneficiaries of CRS Rwanda in Kayonza District. Questionnaire and documentary review was used to collect data and finally the study used descriptive

statistics and inferential statistics as method of data analysis. The results of the first specific objectives revealed that the core types of activities carried out by Catholic Relief Services Rwanda (CRS) in the local community of Kayonza District was provision of microfinance services at very high mean score of 4.57; provision of agriculture services was at very high mean score of 4.35; to provision of health and nutrition services was at very high mean score of 4.12. The results of second specific objectives revealed that the level of food security among beneficiaries of CRS Rwanda in Kayonza District had been improved at very high extent in terms of increase of household income at very high mean score of 4.51; increase of access to health service had aggregate mean of 4.24; food availability had very high mean score of 4.2; food utilization had very high mean score of 4.23; food access and stability had high mean score of 4.06. The findings of third specific objectives revealed that there is a significant weak positive relationship exists between provision of agriculture services and food security improvement at ($r = 0.419^{**}$, p -value $0.000 < 0.01$), there is a significant moderate positive relationship exists between provision of health and nutrition services and food security improvement at ($r = 0.694^{**}$, p -value $0.000 < 0.01$) and there is a significant high positive relationship exists between provision of microfinance services and food security improvement at ($r = 0.741^{**}$, p -value $0.015 < 0.05$), which implies that an increase provision of microfinance services leading to an increase of food security improvement and also, all the independent variables such as provision of microfinance, provision of agriculture services and as well as provision of health and nutrition services had a positive and significant effect on the

food security improvement of its beneficiaries in Kayonza District. An increase of 1 unit in provision of agriculture services; provision of health and nutrition services and provision of microfinance would lead to increase of 0.105, 0.330 and 0.604 units in food security improvement of its beneficiaries in Kayonza District.

Key concepts: NGO's, CRS-Rwanda, food security and rural areas.

I. INTRODUCTION

During the 1980s and early 1990s, non-governmental organizations (NGOs) proliferated throughout American countries, and their role in planning and implementing development projects grew dramatically. The economic crisis affecting American governments is one factor that has contributed to the expansion of NGOs (Garvelink & Wedding, 2017). Political and institutional changes associated with major modifications of state policies have also opened new spaces for NGOs, as alternatives to state agencies in efforts to alleviate poverty and promote development, (Petras, 2014). Esbensen (2016) noted that during the period of military regimes, NGOs worked closely with grassroots organizations, providing socio-political support and organizational trainings.

NGOs are, therefore, seen as vital in the fight against hunger, supplementing government efforts. These organizations concentrate their efforts mainly on agriculture and livestock, water provision, health services, education, technical assistance, promotion of rural industrial development, as well as other income generating activities, and more recently in policy advocacy. Agriculture and food production are the NGOs initiatives which have won the most credit in improving the way of living of beneficiaries, (Dinye et al, 2019).

For instance, here in Rwanda, a study done by Abakunzi (2020) stated that NGOs helped the beneficiaries to develop the culture of saving for the future uncertainties and development so that the poverty can be reduced at a sustained basis. On the other side, NGOs provided moral support to multiple people in critical situation of poverty, disease, and cared for the elderly, sick and children who have various health problems like physical disabilities, mental health and deaf-mute disability. As also reported, there is a need for the improvement of NGOs' activities towards entrepreneurship training and provision of adult education, as means of poverty reduction, (Nyangoma, 2018). Although, various studies are on NGOs initiatives in Rwanda, the study on the NGOs' intervention in food security among rural

people Therefore, the present study sought to fill gap by examining the role international NGO's organization in improving food security in rural areas with reference to catholic relief services-Rwanda, in Kayonza District.

Research objectives

The study was guided the following objectives::

- i. To determine the core activities carried out by Catholic Relief Services Rwanda (CRS) in the local community of Kayonza District;
- ii. To analyze the level of improvement of food security in Kayonza District;
- iii. To find out the relationship between the activities of Catholic Relief Services-Rwanda (CRS) and improvement of food security among its beneficiaries, in Kayonza District.

II. MATERIAL AND METHODS

2.1. CRS background in Rwanda

CRS began operations in Rwanda before 1960, providing humanitarian assistance from neighboring countries until it established an office in 1963. From the 1960s until the late 1980s, CRS implemented a large-scale nationwide school-feeding program. In the 1980s, CRS increased its focus on small enterprise development and agricultural production. During the early 1990s, CRS managed U.S. government-provided food assistance and other aid to respond to the needs of a population suffering increasingly from social unrest and fighting.

At present, CRS works with the Catholic Church and other partners through an integrated approach combining agriculture, nutrition and economic strengthening to help vulnerable people improve the quality of their lives. Peace building programming in Rwanda has focused on community reconciliation that involves promoting trauma healing, peace and justice values, and conflict management and transformation in the community to address the consequences of the 1994 genocide against Tutsi. Today, CRS' programming supports integrated peace building advocacy and economic strengthening activities with cross-border women traders from Rwanda, Burundi and eastern DR Congo.

2.2. Data collection instruments

Questionnaire: Questionnaires were used to collect primary data. These questionnaires consisted of structured and unstructured questions. Administration of the questionnaires was done by dropping and picking them at an agreed time with the researcher (Kothari, 2016). A survey approach was chosen because it is an efficient and economical method to use in comparison to other methods such as observation. Questionnaires with

5-points Likert Scale was administered to collect data, since it is easy for the respondents to use and understand. The questionnaire tool was used to collect information from 377 beneficiaries of CRS-Rwanda, in Kayonza District.

Documentary review was also used to obtain data that the respondents are not able to provide through other methods for various reasons, such as forgetting or sensitivity reasons. With firm assurance on ethical considerations of confidentiality, the researcher requested project director for such documents; these included CRS Rwanda reports.

2.3. Data analysis

Descriptive statistics: Descriptive statistics such as mean, frequency and standard deviation was used to describe the variable like CRSs' activities provision of agriculture services, health and nutrition services, and provision of microfinance, and also the level of food security improvement in terms of increased food availability, increased household income, increased food consumption, increased access to health care and reduction of malnutrition in Kayonza District.

Correlation analysis: Correlation analysis was developed to measure the strength and closeness of the relationship between each independent variable to dependent variable, which is the relationship between CRSs' activities including provision of agriculture services, health and nutrition services, provision of microfinance and education service provision as independent variable, and food security improvement as dependent variable.

Multiple regression models: Multiple regression analysis was used to find out the effect of each predictor such as provision of agriculture services, health and nutrition services, provision of microfinance and education service provision on improvement of food security of beneficiaries of CRS-Rwanda in Kayonza District as dependent variable.

Model specification

The following statistics model was used as follow:

The equation ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$)

Where B_0 = constant

$\{\beta_1, \beta_2, \beta_3, \beta_4 \text{ and } \beta_5\}$ = coefficients of independent variables and μ = error term

Y = Food security of beneficiaries of CRS Rwanda in Kayonza District;

X_1 = Provision of agriculture services;

X_2 = Health and nutrition services;

X_3 = Provision of microfinance.

III. RESEARCH RESULTS

3.1. Descriptive results

3.1.1. Provision of agriculture services to CRS beneficiaries in Kayonza District

The study sought to assess the perception of respondents on the provision of agriculture services to its beneficiaries in Kayonza District. The respondents were requested to indicate their perception on provision of agriculture services. The study used descriptive statistics such as mean, standard deviation, frequency and percent as method of data analysis. The results were summarized in the Table 1.

Table 1: Provision of agriculture services to CRS beneficiaries in Kayonza District

	SD		D		N		A		SA		Mean	St. dev
	fi	%	fi	%	fi	%	fi	%	fi	%		
CRS provide training on post-harvest crop management	16	4.2	38	10.1	25	6.6	69	18.3	229	60.7	4.21	1.19
CRS offering guidance and advice to household members on bio-intensive agriculture techniques	29	7.7	33	8.8	9	2.4	17	4.5	289	76.7	4.34	1.31

CRS Rwanda provided quality seeds to small holder famers	35	9.3	19	5.0	10	2.7	15	4.0	298	79.0	4.38	1.31
CRS Rwanda put much effort in building capacity of beneficiaries using organic fertilizer	11	2.9	35	9.3	38	10.1	34	9.0	259	68.7	4.31	1.15
CRS trained beneficiaries on how to make various types of kitchen gardens to improve their household diet	14	3.7	73	19.4	14	3.7	72	19.1	204	54.1	4.01	1.30
I have got agriculture information inputs on time	2	0.5	18	4.8	4	1.1	38	10.1	315	83.6	4.71	.76
Overall view											4.32	1.17

Source: Primary data, 2022

The overall views of respondents on the statements regarding to provision of agriculture services to its beneficiaries in Kayonza District was at very high mean score of 4.32 and standard deviation of 1.17 which implies that there is enough evidence of existing fact that CRS Rwanda provided agriculture services at very high extent. In the area of livestock rearing, CRS Rwanda provided farmers with livestock such goats, pigs, and rabbits which they rear for three years after which the organization comes for some of the younger ones and leaves the farmer with the parent stock together with some of the younger ones.

3.1.2. Provision of health and nutrition services to CRS beneficiaries in Kayonza District

The study sought to assess the perception of respondents on the provision of health and nutrition services to CRS beneficiaries in Kayonza District. The respondents were requested to indicate their perception on provision of health and nutrition services. The study used descriptive statistics such as mean, standard deviation, frequency and percent as method of data analysis. The results were summarized in the Table 2.

Table 2: Provision of health and nutrition services to its beneficiaries in Kayonza District

	SD		D		N		A		SA		Mean	St. dev
	fi	%	fi	%	fi	%	fi	%	fi	%		
CRS Rwanda have enabled its beneficiaries to pay for health insurance	15	4.0	4	1.1	77	20.4	76	20.2	205	54.4	4.20	1.05

CRS Rwanda have help us to improve hygiene practices through training of community groups on proper hygiene practices	2	0.5	4	1.1	4	1.1	239	63.4	128	34.0	4.29	.60
CRS Rwanda have support us to access to clean water for domestic use using standing water tap and protected wells	2	0.5	88	23.3	54	14.3	39	10.3	194	51.5	3.89	1.28
Overall view											4.12	0.97

Source: Primary data, 2022

The overall views of respondents on the statements regarding to provision of health and nutrition services to CRS beneficiaries in Kayonza District was at very high mean score of 4.12 and standard deviation of 0.97 which implies that the fact appear more that CRS Rwanda provided health and nutrition services at high extent. The findings generally indicate CRS has highly enabled its beneficiaries to pay for health insurance, and there are even very minimal variations in the responses.

3.1.3. Provision of microfinance services to CRS beneficiaries in Kayonza District

The study sought to assess the perception of respondents on the Provision of microfinance

services to its beneficiaries in Kayonza District. Micro-finance and loan service provision was one of the variables investigated under NGOs services. Specific responses were sought on; whether CRS-Rwanda have helped beneficiaries to save money to use, whether Respondents have improved their businesses from trainings, and whether CRS-Rwanda supported beneficiaries to get loan from the formed Saving and Internal Lending groups community(SILC). The study used descriptive statistics such as mean, standard deviation, frequency and percent as method of data analysis. The results were summarized in the Table 3.

Table 3: Provision of microfinance services to CRS beneficiaries in Kayonza District

	SD		D		N		A		SA		Mean	St. dev
	fi	%	fi	%	fi	%	fi	%	fi	%		
CRS Rwanda have help to save money for to use	21	5.6	59	15.6	29	7.7	8	2.1	260	69.0	4.13	1.37
I have improved my business from training I got from CRS	2	0.5	33	8.8	20	5.3	4	1.1	318	84.4	4.60	.97
I have appreciated the access the loan from SILC	2	0.5	4	1.1	4	1.1	65	17.2	302	80.1	4.75	.58
The loan repayment period initiated by their own SILC is long enough	4	1.1	18	4.8	21	5.6	2	0.5	332	88.1	4.70	.86

	SD		D		N		A		SA		Mean	St. dev
	fi	%	fi	%	fi	%	fi	%	fi	%		
CRS Rwanda have help to save money for to use	21	5.6	59	15.6	29	7.7	8	2.1	260	69.0	4.13	1.37
I have improved my business from training I got from CRS	2	0.5	33	8.8	20	5.3	4	1.1	318	84.4	4.60	.97
I have appreciated the access the loan from SILC	2	0.5	4	1.1	4	1.1	65	17.2	302	80.1	4.75	.58
The loan repayment period initiated by their own SILC is long enough	4	1.1	18	4.8	21	5.6	2	0.5	332	88.1	4.70	.86
CRS Rwanda formed SILC as a micro-finance approach to access finance	2	0.5	56	14.9	2	0.5	17	4.5	300	79.6	4.48	1.10
Loan taken from SILC helped me to start business	2	0.5	2	0.5	4	1.1	7	1.9	362	96.0	4.92	.43
Overall view											4.59	0.885

Source: Primary data, 2022

The overall views of respondents on the statements regarding to provision of microfinance services to its beneficiaries in Kayonza District was at very high mean score of 4.59 and standard deviation of 0.885 which implies that there is strong evidence of existing of fact that CRS-Rwanda carried out microfinance services at very high extent. This means that respondents highly agreed that CRS had provided micro-finance service to its beneficiaries and there are low variations in the responses. This implies that the micro-finance is accessible to people. This falls in the same line with the report that states that microfinance services bring together critical empirical work done by credit lenders. He also

explains the demand for and access to financial services by the poor outreach and sustainability micro-finance services focuses on the problem of helping the poor at the household Level, (Zeller (2002).

3.1.4. Food access and stability among beneficiaries of CRS in Kayonza District

The study sought to analyze the level of Food access and stability among beneficiaries of CRS in Kayonza District. The respondents were asked whether agreed or disagreed with the statements regarding to food access and stability. The results were presented in the Table 4

Table 4: Food access and stability among beneficiaries of CRS in Kayonza District

	SD		D		N		A		SA		Mean	St. dev
	fi	%	fi	%	fi	%	fi	%	fi	%		

All family members of my household have access to sufficient food needed to sustain them and live a healthy life.	77	20.4	31	8.2	22	5.8	25	6.6	222	58.9	3.75	1.66
There is enough nutritious food of sufficient quality needs to be available to people for their consumption	40	10.6	28	7.4	21	5.6	13	3.4	275	72.9	4.21	1.41
My household are able to eat and properly metabolize such food	33	8.8	38	10.1	4	1.1	35	9.3	267	70.8	4.23	1.36
Overall view											4.06	1.47

Source: Primary data, 2022

The results from the Table 4 revealed that the overall views of respondents on the statements regarding to the level of Food access and stability among beneficiaries of CRS in Kayonza District was at very high mean score of 4.06 and standard deviation of 1.47. This implies that there is strong evidence that Food access and stability among beneficiaries of CRS in Kayonza District has been improved at very high extent. The findings generally confirm that the responses agreed that respondents and their families have sufficient food consumption and a minimal variation in the responses.

3.2. Multiple linear regression analysis

Multiple linear regression was used to determine the effect of each predictor, such as

provision of microfinance, provision of agriculture services, and as well as the provision of health and nutrition services as independent variables on food security improvement of its beneficiaries in Kayonza District. The regression models were run to test whether the model is significant or not. The statistical significance was verified by the Coefficient (β), t-statistic and Prob. In additional, statistically significant relationship between the dependent variable and independent variable from the model were accepted at 5% significance level. The analysis applied the statistical package for social sciences (SPSS) to compute the measurements of the multiple regressions for the study. Model relationship with audit quality these variables can be arranged in a function or equation as follows:

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.822 ^a	.676	.674	.29543

a. Predictors: (Constant), Provision of microfinance, Provision of agriculture services, Provision of health and nutrition services

Adjusted R square is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in Table 5, the value of adjusted r squared was 0.674 (67.4%) an indication that there was variation of 67.4% on food security improvement of its beneficiaries in

Kayonza District was due to changes in provision of microfinance, provision of agriculture services, as well as provision of health and nutrition services at 95% confidence interval. Additionally, this therefore means that factors not studied in this research contribute 32.6% of food security improvement of its beneficiaries in Kayonza

District and a further research should be conducted to fill in that gap.

Table 6.: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.070	3	22.690	259.978	.000 ^b
	Residual	32.554	373	.087		
	Total	100.625	376			

a. Dependent Variable: Improvement of Food security

b. Predictors: (Constant), Provision of microfinance, Provision of agriculture services , Provision of health and nutrition services

Analysis of Variance (ANOVA) was used to determine the linear relationship among the variables under investigation. Using this method, the sum of squares, degrees of freedom (df), mean square, value of F(calculated) and its significance level was obtained. The results are shown in Table 6. The significance value is 0.000 a which is less than 0.05, thus the model is statistically significant in predicting how various factors affect the food security improvement of its beneficiaries in Kayonza District. F computed was equal to

259.978 while F critical at 5% level of significance was 2.63. Since F calculated is greater than the F critical (value =2.63), this shows that the overall model was significant. The relationship ($p < 0.05$) is an indication that provision of microfinance, provision of agriculture services, provision of health and nutrition services were significantly influencing food security improvement of CRS beneficiaries in Kayonza District. The significance value was less than 0.05 an indication that the model was statistically significant.

Table 7: Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	.224	.169		1.323	.187
Provision of agriculture services	.105	.036	.005	2.916	.012
1 Provision of health and nutrition services	.330	.028	.419	11.987	.000
Provision of microfinance services	.604	.044	.517	13.646	.000

a. Dependent Variable: Improvement of Food security

As per the SPSS generated table above, the equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$) becomes:
 $Y = 0.224 + 0.105X_1 + 0.330X_2 + 0.604X_3$

Where: Y= Improvement of food security;
 X_1 = Provision of agriculture services; X_2 = Provision of health and nutrition services; X_3 = Provision of microfinance services.

According to the regression equation established, taking all the independent variables (provision of microfinance, provision of agriculture services, provision of health and nutrition services) into constant at zero, food security improvement of CRS beneficiaries in Kayonza District was 0.165. The data findings analyzed also showed that all the independent variables had a positive and significant effect on the food security improvement of CRS

beneficiaries in Kayonza District, as indicated by beta values.

The regression results revealed that provision of agriculture services has significance positive effect on food security improvement of CRS beneficiaries in Kayonza District, as indicated by $\beta_1 = 0.105$, $p\text{-value} = 0.012 < 0.05$, $t = 2.916$. The implication is that an increase of one unit in provision of agriculture services would lead to an increase in food security improvement of its beneficiaries in Kayonza District by 0.105 units. Therefore, the study rejected the null hypotheses that stated that there is no significant effect of provision of agriculture services on food security

improvement of its beneficiaries in Kayonza District.

The regression results revealed that provision of health and nutrition services has significance positive effect on food security improvement of its beneficiaries in Kayonza District, as shown by $\beta_2 = 0.330$, $p\text{-value} = 0.000 < 0.05$, $t = 11.987$. This shows that when there is an increase of one unit in provision of health and nutrition services, it would lead to an increase in food security improvement of CRS beneficiaries in Kayonza District by 0.330 units. Therefore, the study rejected the null hypotheses that stated that there is no significant effect of provision of health and nutrition services on food security improvement of its beneficiaries in Kayonza District.

The regression results revealed that provision of microfinance services has significance positive effect on food security improvement of its beneficiaries in Kayonza District as indicated by $\beta_3 = 0.604$, $p\text{-value} = 0.000 < 0.05$, $t = 13.646$. The implication is that an increase of one unit in provision of microfinance services will increase Food security improvement of its beneficiaries in Kayonza District by 0.604 units. Therefore, the study rejected the null hypotheses that stated that there is no significant effect of provision of microfinance services on food security improvement of its beneficiaries in Kayonza District.

IV. DISCUSSION

Based on the findings, for the first objective which was to determine the core activities carried out by Catholic Relief Services Rwanda (CRS) in the local community of Kayonza District; It was revealed that the core activities carried out by Catholic Relief Services Rwanda (CRS) in the local community of Kayonza District were:

1) Provision of microfinance services at very high mean score of 4.57; In **Table 3**, it is obvious that microfinance services carried out by CRS Rwanda to its beneficiaries in Kayonza District, regarding whether CRS Rwanda helped respondents to save money into SILC, whether respondents received credit whether respondents got training in order to improve their business. This is evidenced by the respondents where 69% strongly confirmed that CRS Rwanda helped respondents to save money to use in their daily activities, 80.1% of respondents strongly agreed that they have appreciated the access to the loan from SILC. 88.1% of respondents strongly agreed that the loan repayment period initiated by their

own SILC is long enough. The findings show that in Kayonza District many people have been encouraged to gather in the groups and form SILC known as CARE especially women in order to get loans and solve their dairy activities. The findings agree with Robinson (2009), who shows in a study of 16 different MFIs from all over the world shows that having access to microfinance services has led to an enhancement in the quality of life of clients, an increase in their self-confidence, and has helped them to diversify their livelihood security strategies and thereby increase their income. Microfinance interventions have also been shown to have a positive impact on the education of clients' children.

2) Provision of agriculture services at very high mean score of 4.35; and In respect to agriculture services carried out by CRS Rwanda to its beneficiaries in Kayonza District, the results from the **Table 1** indicate that it is obvious that agriculture service carried out by CRS Rwanda to its beneficiaries in Kayonza District has helped people to access to food security. This is evidenced by the respondents where 60.7% stated that that CRS provided trainings on post-harvest crop management, 76.7% stated that CRS provided guidance and advice to household members on bio-intensive agriculture techniques. It focuses on achieving maximum yields from a minimum area of land, while simultaneously increasing biodiversity and sustaining the fertility of the soil. It is an environmental friendly farming system to grow food using 67% – 88% less water, 50% - 100% less chemical fertilizer and 99% less energy than commercial agriculture, while using a fraction of the resources (Tanja Folnović, 2015). 79% of respondents strongly agreed that CRS Rwanda provided quality seeds to householders. 68.7% of respondents strongly agreed that CRS Rwanda put much effort in building capacity of beneficiaries on using organic fertilizer; and they got agriculture information on time. Farmers got technical training in farm management using their demonstration farms.

3) Provision of health and nutrition services at 4.12 of mean score.

As depicted in **Table 2** concerning the activities of CRS as health and nutrition carried out to its beneficiaries in Kayonza District, the findings revealed that 63.4% of respondents agreed that CRS Rwanda helped them to improve hygiene practices through trainings of community groups on proper hygiene practices and provision of sanitation facilities such as construction of school latrines in the area of intervention, and 51.5% of

respondents strongly agreed that CRS Rwanda supported them to access to clean water for domestic use using standing water tap and protected wells. Water and sanitation committees were trained to ensure that borehole facilities and safe drinking water sources are well maintained.

The findings highly supported Abia (2009), who says that NGOs are involved in the provision of general health services, including the provision of Health insurance, provision of drugs and training health workers, and health education of communities on domestic hygiene, water and sanitation. Often, the presence of NGOs improve access to health care through construction of NGO health units and stocking these with drugs; he added that Some NGOs have further enhanced physical access through the construction or repair of roads.

For the second specific objective which was about analyzing the level of improvement of food security in Kayonza District, it was revealed that the level of food security among beneficiaries of CRS Rwanda in Kayonza District had been improved at very high extent due to an increase of household income at very high mean score of 4.51; increase of access to health service had aggregate mean of 4.24 ; food availability had very high mean score of 4.2; food utilization had very high mean score of 4.23; food access and stability had high mean score of 4.06 where the most 65.8% of respondents strongly agreed that their household income has been increased over the last 4 years with high mean score of 4.29 ; 82% of respondents strongly agreed that their financial savings in SILC have been increased over the last 3 years with high mean score of 4.57; 60.5% of respondents said that they earned monthly income between 50,001 and 100,000 Rwfs; 71.4% of respondents strongly agreed that their families got health insurance, 72.7% of respondents strongly agreed that their family got clean water with high mean score of 4.36; 81.2% of respondents said that they had mutuelle de Santé (health insurance) after being beneficiaries of CRS Rwanda only 16.7% of respondents had Mutuelle de Santé (health insurance); 69.5% of respondents strongly agreed that their households are able to acquire sufficient food to eat a healthy and nutritious diet with very high mean score of 4.4, 58.9% of respondents strongly agreed that percentage of stunted children under three years (or under five years) has been reduced with high mean score of 3.75 ; 67.4% of respondents strongly agreed that people eating at least 3 times per days has been increased with high mean score of 4.08; 80.9% of respondents strongly agreed that all their family members eating

balanced diet with high mean score of 4.50 ; 58.9% of respondents strongly agreed that all family members of household have access to sufficient food needed to sustain them and live a healthy life with high mean score of 3.75 ; 69.2% of respondents strongly agreed that their family have sufficient food consumption and for sale with high mean score of 4.08.

For the third specific objective which was to find out the relationship between activities of Catholic Relief Services Rwanda (CRS) and improvement of food security of its beneficiaries in Kayonza District, revealed that there is a significant weak positive relationship exists between provision of agriculture services and food security improvement at ($r = 0.419^{**}$, $p\text{-value } 0.000 < 0.01$), there is a significant moderate positive relationship exists between provision of health and nutrition services and food security improvement at ($r = 0.694^{**}$, $p\text{-value } 0.000 < 0.01$) and there is a significant high positive relationship exists between provision of microfinance services and food security improvement at ($r = 0.741^{**}$, $p\text{-value } 0.015 < 0.05$), which implies that an increase provision of microfinance services leading to an increase of food security improvement and also there is all the independent variables such as provision of microfinance, provision of agriculture services and as well as provision of health and nutrition services had a positive and significant effect on the food security improvement of its beneficiaries in Kayonza District where provision of agriculture services has significance positive effect on Food security improvement of its beneficiaries in Kayonza District as indicated by ($\beta_1 = 0.105$, $p\text{-value} = 0.012 < 0.05$, $t = 2.916$); provision of health and nutrition services has significance positive effect on food security improvement of its beneficiaries in Kayonza District as shown by ($\beta_2 = 0.330$, $p\text{-value} = 0.000 < 0.05$, $t = 11.987$) and also provision of microfinance services has significance positive effect on food security improvement of its beneficiaries in Kayonza District as indicated by ($\beta_3 = 0.604$, $p\text{-value} = 0.000 < 0.05$, $t = 13.646$) which implies that an increase of 1 unit in provision of agriculture services ; provision of health and nutrition services and provision of microfinance would lead to increase of 0.105, 0.330 and 0.604 unit in food security improvement of its beneficiaries in Kayonza District

Food availability among beneficiaries of CRS in Kayonza District has been improved at very high extent. The findings are supported by Crush (2012) who stated that income is an important factor in food security since households

need to buy in order to secure their food items. It is obvious that town dwellers have to buy food but researches show that even rural dwellers do buy food, even some times most of their food items. He argues that rural households buy some or most of their food with cash. With reference to the findings, CRS has contributed to food security in Kayonza District, therefore, the study rejected the null hypotheses that stated that there is no significant effect of provision of microfinance services on food security improvement of its beneficiaries in Kayonza District.

V. CONCLUSION

The study mainly aimed at assessing the contribution of international non-governmental organization on improvement of food security in rural area of Rwanda, a case of catholic relief services Rwanda in Kayonza District, after having analyzed the data, the researcher come up with the following conclusions:

- The study concluded that the major core types of activities carried out by Catholic Relief Services Rwanda (CRS) in the local community of Kayonza District are provision of microfinance services; provision of agriculture services and the lastly was provision of health and nutrition services
- The study concluded that the level of food security among beneficiaries of CRS Rwanda in Kayonza District has been improved at very high extent in term of increase of household income at very; access to health; availability of food and consumption and food access and stability due to the services and activities carried out by CRS Rwanda to its beneficiaries in Kayonza District
- The study also concluded that there is positive relationship between activities of CRS Rwanda and improvement of food security of its beneficiaries in Kayonza District where provision of microfinance services was the most contributors in improvement of food security as indicated by $\beta_3 = 0.604$, $p\text{-value} = 0.000 < 0.05$ implies an increase of one unit in provision of microfinance services will increase Food security improvement of its beneficiaries in Kayonza District by 0.604 unit. From the study findings and base on the objectives of the study, it can be concluded that the variation of 67.4% on food security improvement of its beneficiaries in Kayonza District was due to changes in provision of microfinance, provision of agriculture services and as well as provision of health and nutrition services at 95% confidence interval.

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