

INFLUENCE OF PARTICIPATORY DATA COLLECTION ON IMPLEMENTATION OF HIV/AIDS PROJECTS IN THE SOUTH NYANZA REGION OF KENYA

^{1*} **Bonface Owiti Abongo**
bonifacegrace2015@yahoo.com

^{2**} **Anaya Senelwa**
wsenelwa@jkuat.ac.ke

^{1, 2} *Jomo Kenyatta University of Agriculture and Technology, Kenya*

Abstract: *One of the growing precincts of monitoring and evaluation is the participation of communities, as well as beneficiaries in the monitoring and evaluation of developmental interventions. Although there is heavy funding of the HIV/AIDS projects in Kenya, evidence shows that the implementation of these projects is on average low with over 60% of the projects not being able to sustain themselves. The general objective of the study was to evaluate the influence of participatory monitoring and evaluation (M&E) on implementation of HIV/AIDS projects in Kenya with a specific objective to establish the influence of participatory data collection on implementation of HIV/AIDS projects in the South Nyanza Region of Kenya. The target population was the 431 project managers of the 431 HIV/AIDS projects in the South Nyanza Region. NGO-funded healthcare projects in Migori County from which 207 project managers were randomly selected. Questionnaires were used to collect primary data while content analysis will be used to collect secondary data. The test-retest coefficient was used to establish reliability of the research instruments while Content Validity Index (CVI) will be used to determine the validity of the questionnaires. Based on correlation results, the association between Participatory Data Collection (X_1) and project Implementation was found to be positive and significant ($r = 0.719$; $p = 0.00$).*

Keywords: *developmental interventions, monitoring and evaluation, participatory data collection*

Introduction

Monitoring and evaluation is increasingly becoming an essential program management tool. According to Dyason (2010), monitoring is the collection along with the analysis of information regarding a given program or intervention; and evaluation is an assessment whose focus is to answer questions relating to a program or an intervention. This depicts monitoring as an ongoing process mainly based on the set targets, planned activities in the course of the planning stage of work. It aids in keeping the work on track, and can let the management know whether things are not running as expected in the course of undertaking the project. If done in a proper manner, it is an instrumental tool for good project management, and offers a suitable evaluation base. It allows one to ascertain if the project resources are enough and whether they are properly utilised, whether the capacity is adequate and suitable, and whether one is doing as planned (Ballard *et al.*, 2017).

Evaluation is more about the results/outcomes and impact of the project. It is usually a periodic assessment of changes in the predetermined results that relates to the program or the interventions of a project (Goyder, 2019). It helps the project manager to arrive at decisions on the project's destiny, and to determine if the project has attained the set goals and objectives. Monitoring and evaluation practices for HIV/AIDS projects worldwide has been shown to depend on the efforts by each country.

One of the growing precincts of monitoring and evaluation is the participation of communities, as well as beneficiaries in the monitoring and evaluation of developmental interventions. Communities must be able to participate in assessing impact, efficiency, effectiveness, relevance, and sustainability of the development intervention. The World Bank (2004) notes that participatory methods provide active involvement in decision making for those with a stake in a project, programme, or strategy, and generate a sense of ownership in the M and E results and recommendations. This brings into focus the need to involve communities' right from the start of the project so that they can be able to monitor and evaluate the development intervention. Beneficiaries themselves or other community members who are knowledgeable about the project can do participatory monitoring and evaluation. The greatest misdemeanour that development practitioners make is neglecting the principle of participatory monitoring and evaluation. Participatory monitoring and evaluation is antithetical to a top-down approach. There are a number of ways through which communities and beneficiaries can monitor and evaluate their projects or development interventions.

HIV prevalence in Kenya has been declining in the last two decades, with national estimates showing that the prevalence among adults (15-49 years) has declined from 10 percent in 1997/98 to 5.2 percent in 2019 (NACC, 2020). HIV/AIDS prevalence varies between regions, ranging from a prevalence of 0.9 percent in North Eastern Region to the highest 13.0 percent in South Nyanza Region (NACC, 2020). Despite the heavy interventions by the Kenyan government in implementing the HIV/AIDS projects, the country depends mainly on external resources to the program with 70% of HIV/AIDS expenditure being from external resources and several donors by 2019. The donors have also raised issues about the slow implementation of the projects. Previous studies have shown that Participatory Monitoring and Evaluation could assist in implementation of such projects.

Monitoring and evaluation (M&E) practices assists in improving performance and achieving results. The goal of M&E practices is therefore to improve current and future management of outputs, outcomes and impact (Ballard *et al.*, 2017). Williams (2010) asserts that monitoring and evaluation provides management and the main stakeholders of a development intervention with indications of the extent of progress and achievement of expected results and progress with respect to the use of allocated funds.

Participatory monitoring provides essential inputs for evaluation and therefore constitutes part of the overall evaluation procedure whereas participatory evaluation is an organized and objective assessment of an ongoing or concluded policy, program/project, its design, execution and results by all stakeholders by helping program implementers and users make informed decisions regarding program operations, service delivery and program effectiveness, using objective evidence (Williams, 2010). However, there is minimal empirical evidence on the influence of participatory project M&E practices on the implementation of HIV/AIDS projects in Kenya and specifically in the South Nyanza Region which has the highest prevalence rates.

Participatory Data Collection and implementation of HIV/AIDS Projects

A study conducted by Mackay & World Bank (2007) in Washington, indicated that planning for monitoring and evaluation was critical in enhancing better project performance on government projects. The focus of this study was on participatory data collection in the government projects that are majorly sponsored by World Bank. The study sought to determine how better governments can be arrived at through monitoring and evaluation of projects. This study employed the use of descriptive statistics with the findings being that a majority of the respondents indicated that there was lack of monitoring and evaluation practices in the various projects which they formed part of. The study found that participatory data collection has a positive influence on project implementation.

A study by Muhammad *et al.*, (2012) on project performance, with the variables, Participatory Project Planning, Implementation and Controlling Processes in Malaysia College of Computer Sciences and Information, Aljuf University, noted project management offers an organization with control tools that advance its capability of planning, implementing, and controlling its project activities. The study was to identify those project performance enhancements through planning, implementation and monitoring processes. Variable models used to identify how each stage is helpful in the process of managing project performance. To achieve this objective, information relating to different projects and models related to project planning, execution, control, and proposal of project performance explored; the findings showed project-planning processes contribute to the project performance.

A study that was conducted by Singh, Chandurkar, & Dutt (2017) highlighted that monitoring and evaluation was the major driving factor in development projects. The objective of this study was to determine the effect of participatory monitoring and evaluation on development projects. However, the recommendation that was given in this study was that the management should provide full support and should fully engage themselves in the monitoring and evaluation process as this will help them in coming up with sound and well-informed decisions. The study found no relationship between the variables.

Statement of the Problem

Kenya receives support for HIV/AIDS projects from the US Government's President's Emergency Plan for AIDS Relief (PEPFAR), Global Fund for AIDS, TB and Malaria (GFATM), World Bank, UK Department for International Development (DiD) and a number of other bilateral donors and foundations (The World Bank, 2020). As observed by Mutisya (2019), since Kenya depends mainly on external resources to finance health with bilateral donors contributing over 70% of the funding for HIV/AIDS by 2019, implementation of these projects is of paramount importance if Kenya is to achieve the Sustainable Development Goals.

Although there is heavy funding of the HIV/AIDS projects in Kenya, evidence shows that the implementation of these projects is on average low with over 60% of the projects not being able to sustain themselves. Moreover, over 70% of the projects implemented in the South Nyanza Region which has the highest HIV/AIDS prevalence rate have been reported to be having financial and operational performance challenges which point to poor implementation of the projects.

A number of previous studies have attempted to address the issue of HIV/AIDS project implementation (Chenga *et al.*, 2016; Kanda, Muchelule & Madadi, 2016). While these studies show that monitoring and evaluation influences project success in different ways, most of the literature focuses on development of sustainability models, including determining the factors that influence sustainability. None of the studies seeks to determine the extent to which participatory M&E variables of participatory data collection, participatory data analysis, participatory results dissemination and participatory utilization of results influences implementation of these projects. Some studies have been done on project implementation but have not been able to focus on HIV/AIDS projects in the Kenyan or African context.

A review of literature shows that although there is empirical evidence showing that participatory M&E could influence implementation of projects, there are scanty studies on the influence of participatory M&E on implementation of HIV/AIDS projects in the South Nyanza Region of Kenya. This is the gap the present study will seek to fill.

Objectives of the Study

The general objectives of the study was to evaluate the influence of participatory M&E on implementation of HIV/AIDS projects in Kenya with a specific objective to influence of participatory data collection on implementation of HIV/AIDS projects in the South Nyanza Region of Kenya.

Research Methodology

The survey research design was employed in the study. The target population was the 431 project managers of the 431 HIV/AIDS projects in the South Nyanza Region. NGO-funded healthcare projects in Migori County from which 207 project managers were randomly selected. Questionnaires were used to collect primary data while content analysis will be used to collect secondary data. The test-retest coefficient was used to establish reliability of the research instruments while Content Validity Index (CVI) will used to determine the validity of the questionnaires.

Reliability of the Data Collection Instrument

Instrument reliability refers to the consistency of scores or answers from one administration of an instrument to another, and from one set of items to another (Fraenkel & Wallen, 2003). Reliability was used to check the internal consistency of the data measuring instrument. For this study, Cronbach’s Alpha (α) was used to test for the instrument reliability. According to Cronbach (1952), the general assumption is that the correlation between all the items under consideration in the study ought to be positive since they are measuring the same thing. This further illustrates that a reliable coefficient should be between 0.00 and 1.00. However, as Nunally (1978) contends, a general rule for measuring Cronbach’s should be above 0.7.

Table 1: Reliability Statistics

Variables	Items	Item-Total Statistics				Reliability Statistics			
		Scale mean if Deleted	Scale Item Variance Deleted	Corrected if Item-Total (R)	Squared Multiple Correlation	Cronbach's Alpha Deleted	Cronbach's Alpha if Item Deleted	Cronbach's Alpha Based on Stdz Items	No. of Items
Participatory Data Collection	PDC1	46.6087	21.067	.450	.543	.826	.852	.862	6
	PDC 2	46.6957	24.040	-.037	.491	.857			
	PDC 3	46.4348	18.530	.756	.820	.799			
	PDC 4	46.4783	19.261	.810	.796	.799			
	PDC 5	46.6957	22.130	.219	.370	.845			
	PDC 6	46.8261	19.696	.476	.656	.826			
Project Implementation	PI1	21.6111	19.072	.801	.689	.887	.809	.210	6
	PI2	21.5333	19.488	.738	.593	.895			
	PI3	21.7333	19.658	.681	.559	.902			
	PI4	21.6889	20.486	.732	.559	.896			
	PI5	21.5000	20.073	.722	.581	.896			
	PI6	21.3778	20.170	.752	.589	.893			
Overall Alpha							.809	0.800	30

The independent variable of the study was Participatory Data Collection (PDC). This variable was measured by 6 items. The items were subjected to Cronbach’s alpha analysis. Results in Table 1 on the previous page indicate that the 6 items had a Cronbach’s alpha of 0.852. This means that all the items were reliable and were adopted for the main study.

Validity of the Data Collection Instrument

The type of validity tested for the present study is construct validity. Construct validity which is the degree to which a test measures what it claims to measure (Straub *et al.*, 2004) was assessed using convergent and discriminant validities. According to Waltz, *et al* (2010), convergent validity defines the degree to which two measures of constructs that theoretically should be related are actually related, while divergent/discriminant validity tests whether the measurements that are supposed to be unrelated are actually unrelated. Construct validity is measured mostly using Confirmatory Factor Analysis (CFA).

Factor loadings of constructs and Average Variance Extracted estimations were used to assess convergent validity of each of the constructs (Hair *et al*, 2010). According to them, the ideal standardized loading estimates should be 0.7 or higher, but that factor loadings with score of 0.5 or higher are very significant. Factor analysis is mainly the internal correlations among items under study to ensure that there is consistent correlation among items under study (Mugenda & Mugenda, 2010). The detailed analysis of the analysis is shown in Appendix IV while the summary of the factor loadings is shown in Table 2;

Table 2: Factor Loadings

Construct	Average Factor Loadings
Participatory Data Collection	0.855
Project Implementation	0.840

Based on the findings in Table 2, with factor loadings of more than 0.5, it was concluded that the constructs were valid in terms of convergence validity

Results and Discussions

The objective of the study was determine the influence of Participatory Data Collection on implementation of HIV/AIDS projects in the South Nyanza Region of Kenya. The respondents were asked to indicate their levels of agreement or disagreement with specific statements drawn from measures of this risk response measure. A five-points Likert’s scale was used where 1 was Strongly Disagree, 2 was Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. Descriptive statistics used to analyse the data were weighted means and the standard deviation. Table 3 shows the findings.

Table 3: Descriptive Results of Participatory Data Collection

Key: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Statements	SD	D	N	A	SA	Mean	Std. Dev.
PDC 1: Our NGO includes many stakeholders when interviewing during monitoring and evaluation of HIV/AIDS projects	21.3%	14.5%	3.6%	42.5%	18.1%	3.21	1.45
PDC 2: There are systems that include stakeholders when collecting information for M&E purposes.	21.3%	17.6%	2.7%	45.2%	13.1%	3.11	1.41

PDC 3: Our organization has sufficient mechanisms that ensure internal control for participatory data collection for M&E purposes.	20.8%	18.1%	12.7%	44.8%	3.6%	2.92	1.26
PDC 4: Data collection in our organization for monitoring and Evaluation is effective since it is participatory in nature.	20.4%	43.1%	2.7%	15.2%	18.6%	3.28	1.43
PDC 5: The funding partners have a programme of training all stakeholders to ensure effective data collection for M&E	20.4%	62.2%	0.0%	17.4%	0.0%	3.14	1.26
PDC 6: My organization provides all the required funding to help in participatory Data collection for M&E purposes	18.4%	12.2%	0.9%	44.5%	24.0%	3.37	1.47
Average						3.17	1.01

Six statements were used to measure Participatory Data Collection of the six statements, the respondents generally neither agreed nor disagreed on whether Participatory Data Collection strategies were instituted in the HIV/AIDS projects. This is shown by the weighted average means of between 2.92 and 3.37 which are all close to 3. However, out of the six statements, the respondents rated the statement that their organization provides all the required funding to help in participatory Data collection for M&E purposes highest with a weighted average mean of 3.37 while the statement that organization has sufficient mechanisms that ensure internal control for participatory data collection for M&E purposes received the lowest rating with a weighted mean of 2.92. The weighted average of 3.17 shows that generally, the respondents were undecided on whether Participatory Data Collection was instituted in the projects.

Descriptive Results of Implementation of Projects

The dependent variable of the study was Implementation of HIV/AIDS projects in the South Nyanza Region of Kenya. Descriptive statistics for the analysis are shown in Table 4 below. The dependent variable was also measured by six statements. Out of the six statements that were used to measure it, the respondents generally neither agreed nor agreed on whether Implementation rate of Implementation of HIV/AIDS projects was effective or not. This is shown by the weighted average means of 3.29.

Table 4: Descriptive Results of Implementation of Projects

Key: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Statements	SD	D	N	A	SA	Mean	Std. Dev.
PI 1: Our HIV/AIDS project is effectively implemented	20.4%	19.0%	3.2%	22.6%	34.8%	3.32	1.59
PI2: Our project will continue to make a positive difference in the lives of the stakeholders since it is implemented appropriately	20.4%	14.0%	0.9%	33.9%	30.8%	3.40	1.53
PI3: The project is implemented within the budget as originally planned.	20.8%	12.2%	0.9%	35.3%	30.8%	3.42	1.53
PI 4: Our project is project sustainable	20.8%	12.7%	1.4%	43.4%	21.7%	3.32	1.47
PI 5: There is a high chance that our organization was operating effectively five years from today	21.3%	15.4%	4.1%	36.7%	22.6%	3.23	1.49

PI 6: We have systems that can ensure we continue operating even after the donors leave. 21.3% 19.5% 5.4% 40.3% 13.6% 3.05 1.41

Average **3.29** **1.31**

Inferential Statistics

The study conducted diagnostic tests which included multicollinearity test, and normality test. The tests were conducted to establish whether the data collected were accurate, reliable and capable of inferring the study results to the population.

Multicollinearity Test

This study sought to find out the collinearity among the independent variables using tolerance and variance inflation factor (VIF) statistics of the predictor constructs. Variance inflation factor (VIF) was retrieved to test the presence of Multicollinearity (Billings & Wroten, 1978). The VIF's not more than 2.0, which suggested the absence of possible threats from multicollinearity (Hair *et al.*, 2009). Table 5 shows the result of the test.

The study adopted a threshold value of variance inflation factor of 4.0 to represent high multicollinearity status. The findings as shown in Table 5 revealed that the independent variables had high tolerance values, which indicates that the beta values of the regression equation of the independent variables would be constant with low standard error terms. Tolerance is whereby part of the denominator in calculating the confidence limits on the partial regression coefficient. As by Porter and Gujarat (2009), the VIF of independent construct that exceed 10 as a rule of thumb is regarded as collinear. This means that there was no collinearity among the observed independent variable which had a VIF of over 10.

Table 5: Multicollinearity Test

Model		Tolerance	VIF
1	Participatory Data Collection	.734	1.362
a. Dependent Variable: Implementation of Projects			

Normality Test

Normality test was done using Shapiro-Wilk test and Kolmogorov Tests. Shapiro-Wilk is appropriate for smaller samples less than 50 while Kolmogorov-Smirnov (KS) is appropriate for larger samples. As per Kolmogorov-Smirnov (KS) and Shapiro-Wilk test values indicate insignificant statistics with p-values exceeding the standard p-value of 0.05. This study used Kolmogorov-Smirnov (KS) since the sample size is larger. According to Ricci, Baumgartner, Malan, and Smuts (2019), when the significance level of a variable is more than 0.05, we reject the null hypothesis that the data is not normally distributed. In this study, it was established that the P-values for the variables were more than 0.05 hence the null hypothesis was rejected. This implies that the responses on the variable were normally distributed.

Table 6: Normality Test

Variables	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
Participatory Data Collection	.065	221	.200

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Correlational Results of Study Variables

In the present study, correlation was used to explore the relationship among a group of variables as suggested by Pallant (2010). A correlation coefficient of +1 indicates that two variables are perfectly related in a positive linear sense; a correlation coefficient of -1 indicates that two variables are perfectly related in a negative linear sense, and a correlation coefficient of 0 indicates that there is no linear relationship between the two variables. A correlation coefficient of between 0.0 and 0.19 is considered to be “very weak”, between 0.20 and 0.39 is considered to be “weak”, between 0.40 and 0.59 is considered to be “moderate”, between 0.60 and 0.79 is considered to be “strong” and between 0.80 and 1.0 is considered to be “very strong” Pallant (2010). The results of the correlation analysis are presented in Table 4.15.

Table 7; Correlation among Study Variables

Variables		X_1	X_2	X_3	X_4	Y
X_1	Pearson Correlation	1				
	Sig. (2-tailed)					
Y	Pearson Correlation	.719**	.585**	.654**	.768**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis shows the direction, strength and significance of the relationships among the variables of study (Sekaran, 2000). A positive correlation indicates that as one variable increases, the other variables will also increase. On the other hand, a negative correlation indicates that as one variable increases the other variable decreases (Sekaran, 2003). As it can be inferred from Table 7 above, there is a high correlation between the study independent variable (X_1) and the dependent variable (Y).

Specifically, the association between Participatory Data Collection (X_1) and project Implementation is positive and significant ($r = 0.719$; $p = 0.00$). This implies that for every unit increase in Participatory Data Collection, there is a positive increase of 0.719 in project Implementation. However, this does not show causation. Similarly, the association between Participatory Data Analysis and project Implementation is positive and significant ($r = 0.585$; $p = 0.00$). This implies that for every unit increase in Participatory Data Analysis, there is a positive increase of 0.585 in project Implementation. Additionally, the association between Participatory Results Dissemination and project Implementation is positive and significant ($r = 0.654$; $p = 0.00$) implying that for every unit increase in Participatory Results Dissemination, there is a positive increase of 0.654 in

project Implementation. Lastly, Table 7 shows that the association between Participatory utilization of M&E results and project Implementation is positive and significant ($r = 0.768$; $p = 0.00$). This implies that for every unit increase in Participatory utilization of M&E results, there is a positive increase of 0.768 in project Implementation.

These results agree with those by Muhammad *et al.*, (2012) on project performance, with the variables, Participatory Project Planning, Implementation and Controlling Processes in Malaysia College of Computer Sciences and Information, Aljouf University, who noted that project management offers an organization with control tools that advance its capability of planning, implementing, and controlling its project activities.

Regression Results

The research used multiple regression analysis to determine the linear statistical relationship between the independent and dependent variables of this study. According to Young (2014), regression analysis helps to explain the statistical relationship between variables thus enhancing the ability of the study to make substantive conclusions and recommendations. For the present study, the regression was run based on the predicted regression model below;

$$Y = \beta_0 + \beta_1 X_1 + \mathcal{E} \dots\dots\dots(1)$$

Where:

Y = Implementation of HIV/AIDS projects

X_1 = Participatory Data Collection,

β_0, β_1 = Regression Coefficients for the independent variables

\mathcal{E} = Error term, which was assumed to be normally distributed.

Results for the regression analysis are explained in Table 8 for the regression coefficients respectively.

Table 8: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.775	.860		2.064	.000
X_1	.205	.095	.251	2.165	.001

a. Dependent Variable: Y

From Table 8 above, several inferences can be derived. The constant term in the regression equation of 1.775 indicates the level of project Implementation that is present in the construction projects in the county.

The first objective of the study was establishing the influence of Participatory Data Analysis practice on implementation of HIV/AIDS projects in the South Nyanza Region of Kenya, Kenya. Results in Table 8 shows that Participatory Data Collection practice (X_1) has a positive statistically significant effect ($\beta = 0.205$, $p = 0.000$) on implementation of HIV/AIDS projects in the South Nyanza Region of Kenya. This implies that holding all factors constant, a unit increase in Participatory Data Collection leads to a 20.5% significant increase in implementation of HIV/AIDS projects in the South Nyanza Region of Kenya. These results agree with those by Wanyonyi (2015) who conducted a survey on participatory data collection and those Merna (2014) who found a positive association between participatory data collection and project management. The

results also agree with those by Koolwijk (2015) who also studied participatory data collection elements in two separate project partnerships between a customer and a contractor. The results of the study demonstrated a strong match between the participatory data collection items. In this study, Ahamed and Azhar (2014) evaluated participatory data collection assessment and management strategies adopted by Florida construction firms.

After the analysis, and based on the results from the analysis, the following model was fitted in the study;

$$Y = 1.775 + 0.205X_1 \dots\dots\dots(2)$$

Summary of Findings

This study set out to generally establish the influence of risk response strategies on implementation of HIV/AIDS projects in the South Nyanza region, Kenya. The specific objectives of the study was to determine the influence of Participatory Data Collection practice on implementation of HIV/AIDS projects in the South Nyanza region , Kenya. After data collection and analysis, the following were the findings of the study as summarized.

Based on correlation results, the association between Participatory Data Collection (X_1) and project Implementation was found to be positive and significant ($r = 0.719$; $p = 0.00$).

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