Influence of Project Technical Skills on Performance of Community based Human Immuno Deficiency Virus Projects in Kiambu, Kenya

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Abstract

Identifying factors that are critical for the success of HIV projects not only leads to initiating mechanisms for efficiency and effectiveness in projects, but also for implementation of projects on time. This study sought to establish how project environment factors influence performance of HIV projects that are based at the community level in Kiambu, Kenya. The International community has committed to end AIDS by 2030, but this remains a big concern for the 160 Countries under the United Nations Joint Programme on AIDS (UNAIDS) on how to reach this target and achieve the Sustainable Development Goals. HIV prevalence in Kenya has stabilized at 6% for the last ten years, hence the need for more innovative ways of implementing projects. With 53% of HIV financing being channeled through extra budgetary allocation to Not for Profit Organizations to implement community based HIV projects, there is need to identify CSF that will lead to value for money for every HIV intervention. With only half of Africa's development projects succeeding, and with majority of the projects failing to be delivered within schedule, cost, and quality, it is of essence that critical success factors that influence community based HIV projects are established. These factors relate to efficiency, effectiveness, relevance and sustainability. The scope of the study was NPOs in Kiambu, Kenya. The study used descriptive survey research method and adopted stratified random sampling to identify a sample size of 151 respondents out of the target population of 249 NPOs implementing HIV projects in the 12 sub-Counties in Kiambu. A structured questionnaire with closed and open ended questions collected primary data. A pilot study to test the reliability of the research instrument using Cronbach's alpha and validity using Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity was undertaken. The primary data collected was edited, cleaned and analyzed using descriptive statistics with the aid of Statistical Package for Social Science (SPSS 21.0). Correlation and regression was used to determine the relationship between project technical skills and performance of Community based HIV projects. Data was presented in tables and figures. The study found that technical skills were found to have a positive and significant relationship with project performance. The study recommends that project managers and the project team should possess professional qualifications and training in monitoring and evaluation, and effective communication skills. The projects should also have a monitoring and evaluation plan, and a communication plan or strategy targeting each stakeholder. Lessons learnt should be identified and documented as the project progresses rather than waiting to identify them at key milestones or at the end of the project as the team may have forgotten them or may be focused in closing the project rather than documenting lessons learnt.

Key words: *Kenya, Kiambu, critical project success factors, project performance, community based HIV projects, project technical skills*

1.0 Introduction
1.1 Background of the Study

Critical Success Factors define key areas of performance needed by the project to achieve its objectives. These key areas if made explicit to all in the organization provide a foci where the

project must focus on to achieve its mandate. The concept of CSFs has evolved from primary measures of efficiency (time, scope and budget) to long term measures related to effectiveness and outcome (Muller, 2016). Project success was initially associated with achieving the project objectives and the intended results within time, cost and quality. However, with more research, this golden triangle was identified as insufficient to define project success (Beleiu *et al.*, 2014). With time, project success criteria has grown from quantifiable triangle of cost, schedule and scope which measure efficiency to an improved perspective of quantifying impact and effectiveness (Bryde, 2005; Muller, 2016). The concept of CSF has generated considerable interest in project management as CFS support management to strategize, manage, monitor and achieve project goals (Ika, 2012). The concern with project success is relevant as the number of projects failing is rising with over 30% of projects not meeting their objectives (PMI, 2013).

Critical success factors relates to all projects whether they are in Information Technology, Physical projects such as the construction and engineering; or social projects such as health, or education. Critical success factors are important in any project, hence the need to identify, analyze and prioritize them based on their contribution to the project performance. The critical success factors have in its underlying assumptions that for all projects to be successful, they must be within cost, schedule and quality. Prabhakar (2008) disagrees with this view and argues that most projects experience low performance in terms of time, scope and budget but are perceived successful while others are within this triangle but have been considered failed as they didn't address sustainability issues and community participation during the project cycle.

Research in Critical success factors has not yielded a complete list that meets the needs of all projects (Ika, 2009) as there is variance between projects based on their scope, uniqueness, and complexity (Wateridge, 1995). Despite each project's uniqueness, there is need for stakeholders to agree on what constitutes CSFs. Development of CSFs ought to take into account the various stages of the project cycle from conceptualization to closure. If these factors are identified before project commencement, project failure is minimized. Mobey and Parker (2002) noted the importance of the entire project team understanding the project CSF at initiation and across the project cycle.

Most of the CSFs studies have been global and context specific making it difficult to apply them locally, hence the need for CSFs specific to community based HIV projects in Kenya. HIV has been identified under the Kenya Government's Universal Health Coverage agenda as one of the diseases requiring accelerated prevention, care and treatment, and stigma reduction. The Kenya Vision 2030 and the three Medium Term Plans (MTP) identified HIV under the social pillar and set to reduce Kenya's prevalence. The country has from the two completed MTPs not been able to meet its target of reducing HIV prevalence (NACC, 2016a). This calls for innovative implementation of HIV projects especially at the community level. Most of the HIV interventions at the community level are undertaken through projects by NPOs. Donor funding for HIV and AIDS is channeled either through the government budgetary system or donor administered programs by NPOs. Donors' extra budgetary allocation to NPOs is greater than the government on-budget support and has been increasing gradually (Kelly *et al.*, 2005). In reality, the performance of community HIV projects has been poor as evidenced by the high HIV prevalence, budget overruns, delay in project completion and inability to meet beneficiary expectations.

1.2 Statement of the Problem

Projects are vectors for change and for the implementation of strategies and innovations that can bring competitive advantages to companies (Osorio *et al.*; 2014). They contribute to organizations achievement of their strategic goals and objectives. Toor & Ogunlana (2009)

observes that there is evidence of poor project performance across various industries and types of projects, with the failure going unnoticed and suppressed, often with serious consequences. The performance of community HIV projects has been poor as evidenced by the high HIV prevalence, budget overruns, delay in project completion and inability to meet beneficiary expectations. With threats of reduction in donor funding for HIV, and with international sources accounting for 63% (NACC 2014), the need for efficiency and effectiveness in these projects is paramount. The International community has committed to end AIDS by 2030, but this remains a big concern for the 160 Countries under the United Nations Joint Programme on AIDS (UNAIDS) on how to reach this target and achieve the Sustainable Development Goals. Africa has the highest epidemic, with Kenya having the second highest burden globally. (Toefy, 2017). Though there are disparities across counties, 65% of new infections can be traced to 9 out of the 47 counties (NACC *et al;* 2013). HIV therefore remains a disease of concern as it continues to burden households and health systems as well as causing morbidity and mortality. Kenya made a commitment under the Millennium Development Goal six (6) to halt and begin to reverse the spread of HIV and AIDS by 2015 (NACC, 2016a). However, the HIV estimates for 2015 indicated that the national prevalence was 5.9%, an increase of 0.8% from 2012, with 77,647 new infections recorded in 2015 (NACC, 2016a). To accelerate the reduction in HIV infections, Kenya adopted a multisectoral response by bringing on board all stakeholders to respond to HIV within their context (NACC, 2014). The community was engaged to address HIV prevention, stigma reduction and support for those infected and affected. Community based interventions were expected to yield highest return on investment as communities understand their problem better and respond appropriately within their local context.

HIV financing in Kenya is either through the government budgetary system or donor administered programs by NPOs. Donors' extra budgetary allocation to NPOs is greater than the government on-budget support and has been increasing gradually (Kelly *et al.*, 2005). Kenya's expenditure on HIV for the period 2009/10 – 2011/12 totaled 2,466 Million US$, with 70% of this resource coming from donors. Out of this amount, 49%-53% accounted for resources that the NPOs utilized in the HIV response in the 3 year period. (NACC KNASA, 2014). Though the World Bank has spent close to US 5 $ Billion in the last 20 years on 700 projects in Africa, 50% of these failed (Dugger, 2007), a failure rate that is above the 40% recorded in other poor regions in the world. With 50% success rate, the African projects are therefore lagging behind (Chauvet *et al.,* 2010) translating to projects failing to deliver on quality, schedule and cost. Due to the economic and social impact of HIV on communities, HIV projects should deliver on expected results within schedule and cost. This is especially since 53% of HIV financing in Kenya is channeled through community based projects (NACC KNASA, 2016). However, the amount of donor aid supporting HIV has not translated to proportionate reduction in new HIV infections, stigma and AIDS related deaths. The lack of expected results amounts to financial loss and stakeholder dissatisfaction. There is need therefore for more innovative ways of running these projects. To address this gap where efforts of project stakeholders do not translate to results, it is important to identify critical success factors that the project team should focus on. Since donors have strict limitation on budgets, scope and schedule for HIV projects, the need to identify CSFs that lead to successful projects that meet donor and beneficiary expectations need to be prioritized.

1.3 Objective of the study
This study sought to evaluate the influence of project technical skills on performance of community based HIV projects in Kiambu, Kenya.

2.0 Review of Related Literature
2.1 Theoretical Framework
Two theories have been discussed in this paper. These are human capital theory and skills theory. Human Capital as a theory was proposed by Schultz (1961). In 1981 he further developed on this term arguing that human abilities are either inborn or acquired, and these abilities transform into human capital when developed further (Armstrong, 2009). Fisher *et al., (*2003) and Bontis *et al.,* (1999) observes that human resource which include intelligence, skill and mastery is most important in organizations, and how this resource is managed gives the project a competitive edge. Armstrong (2009) notes that human capital includes intellectual, social and organizational capital, with knowledge, networks and interactions and stored information being key. Human capital remain a valuable asset in projects and is key in determining their performance. Fugar *et al.,* (2013) supports this view that human capital remains core in projects and determines their competitiveness and profitability. Specifically, the project manager ought to have well developed communication skills, be able to manage people, time and resources well, be able to resolve conflicts and be willing to take risks (Sudhakar, 2012). The theory recognizes people as assets and the need for an organization to realize so and invest in them to generate returns. This theory supports project manager competence and technical skills as critical factors for performance of community based HIV projects. Though the human capital theory addresses the project team skills aspect, it does not address their attitude which could affect acceptance of the project and consequently its implementation.

Skills theory focuses on what characteristics make leaders effective. This theory was proposed by Robert Katz in 1955 and Michael Mumfords in 2000. According to the leadership approach the skills, knowledge and abilities of a leader determines their effectiveness. A leader can learn skills and accomplish more after achieving competency and proficiency (Northouse, 2007). Therefore the degree of importance of each skill whether conceptual, human or technical is a correlation of the project team member's position in the project (Katz, 1995). This theory lays more emphasis on learned skills as a determinant of performance than traits. Mumford *et al.,* (2000) observes that an effective leader should have personal attributes, competencies, experience, leadership skills and ability to handle environmental influences. A leader's performance is therefore influenced by their knowledge and skills. Skills theory places leadership performance on learned skills rather than on personal traits. Therefore any person could learn and adapt to a specific set of skills to become a leader.

2.2. Empirical Review
Shair (2016) studied the role of project technical skills on success of Kazi Kwa Vijana government projects in Kenya. Using a descriptive research survey design he administered a questionnaire to 217 respondents after selecting the sample using simple random sampling from a population of 500. Using SPSS, descriptive and inferential statistics were generated and study findings presented in charts and tables. The results were that recruitment of KKV employees wasn't informed by similar projects and that since there was no regular trainings, the employees couldn't transfer the gained knowledge. Further, the project lacked internal systems to monitor finances leading to poor budgeting. Similarly the project lacked schedule and activity tracking and as such project progress evaluation and reporting wasn't done. This study supported the research by identifying technical skills as project CSFs.

Serhan and Draganov (2016) study aimed at exploring how the project manager as a leader is communicating with the different stakeholders in order to reach the sustainable goals of his/her project. Primary data was collected using a questionnaire that was sent to project managers from different countries, that are working with projects focusing on implementation of sustainability in their projects and project managers that are not focusing on sustainability in their projects. A comparison between the answers of the different project managers was made, in order to determine in each phase of the project, if there is a difference in the stakeholder engagement and use of communication skills, when it comes to project managers working on construction projects with a focus on sustainable development. Communications skills are essential for addressing the sustainable aspect of a construction project, because it is more complex. Therefore communication is essential for solving the sustainable challenges of a project.

Bwoma (2011) undertook a study on the influence of technical skills on performance of youth projects in Kisii. Using a descriptive survey, he targeted a population of 1400 youths. He sampled 302 youths and administered questionnaires to 21 youth groups. He used quantitative and qualitative techniques to analyse the collected data. The findings were that the youth groups required training on entrepreneurial skills including financial management, leadership skills and business and marketing skills. This study supported the current research by identifying technical skills as influencing performance. Rotich *et al.*, (2014) administered a questionnaire and interview schedule to 36 project managers from 7 NGOs in Uasin Gishu County. Their research identified planning, leadership and monitoring as affecting project performance. Though this research contributes to CSFs in the NGO sector, if failed to put into consideration stakeholder participation and community ownership of the project. Doherty (2011) in his study of CSF for IT projects administered a questionnaire to 519 project managers with experience on IT projects and who were members of Project Management Institute (PMI). He proposed six critical success factors which included top management, clear project goals, project manager skills, expertise of the project team, realistic project schedule, and obtainable project requirements. While this research informs the present study, it did not address stakeholder involvement and environmental factors.

Mbawi and Muchelule (2015) identified planning, management support and social capital, communication, monitoring and evaluation as CSFs for performance of public universities in Kenya. They administered a questionnaire to 12 project managers and 124 team members. Their study supports the current study for search for CSFs by identifying planning, governance and technical skills but failed to address stakeholder involvement and environmental factors. Mwaura and Karanja (2014) administered a questionnaire to 52 respondents from Community Based Organizations in Kisii County on performance of their projects. They identified project governance, project management, financial management and community participation as critical factors for project performance of CBO projects. This study contributed to the search for CSFs for community projects. It however did not address top management and project goals as CSFs.

In their study of CSF for International Development projects in Maldives, Yamin and Sim (2016) received 41 responses to a questionnaire administered to a project team. They observed that coordination; monitoring; project design; institutional environment; and training were ranked as the most important project CSFs. Their study identified monitoring and environmental factors, but failed to consider stakeholder support and acceptance by beneficiaries. Its main focus was only on organizational internal factors thus ignoring CSF associated with factors external to the organization.Wang and Hu (2012) undertook a study on role of communication on project

performance. They collected data using questionnaires which was analysed using SPSS. They found that communication was positively and significantly related to project completion on schedule, hence overall performance. Phiri (2015) studied influence of monitoring and evaluation on project performance. The study conclusion was that monitoring and evaluation had a positively and proportional influence on project performance. The study noted that there was need for the project to have an M&E plan before commencing implementation.

3.0 Research Methodology

This study used a descriptive survey to determine the relationship between project technical skills and performance of community based HIV projects. Proportionate stratified sampling was used to generate a sample from each of the 12 subcounties in Kiambu County. The total population of NPOs implementing HIV community based HIV projects is 249. A sample size of 151 was generated with the sample size of each stratum/subcounty being proportionate to the population size of the same stratum/subcounty. The number of NPO in each strata/ sub-county was listed and a random number generator used to identify the NPOs in each strata who would form the sample size. A structured questionnaire with closed and open ended questions collected primary data. A pilot study to test the reliability and validity of the data collection instrument was done. Cronbach's alpha ∝ assessed the reliability coefficient of the research instrument. The Cronbach's Alpha was above 0.7 making the study reliable. Study validity was tested using The KMO and Bartlett's Test of Sphericity (BTS). The KMO value was above 0.5 and BTS below 0.05 making the study valid. The questionnaire data was tabulated using computer excel package and analysed using IBM Statistical Package for Social Science (SPSS) version 21.0. Descriptive statistics, measure of central tendency, measure of dispersion and inferential statistics comprising of coefficient of determination, ANOVA, correlation and linear regression model were used to study the relationship between the independent and dependent variables. Data was presented in tables.

4.0 Results and Discussion

4.1 Descriptive analysis

Descriptive analysis was conducted on the statements on project technical skills. The results are shown in Table 4.1. To interpret the results, totally agree was combined with agree to be agree and totally disagree was combined with disagree to give disagree.

Table 4.1: Descriptive Statistics for Project Technical Skills

Statements	totally disagree	disagree	not sure	agree	totally agree	Mean	Std. Deviation	CV
Progress against objectives	1.50%	3.80%	0.00%	54.60%	40.00%	4.28	0.79	0.18
Progress against budget	2.30%	5.40%	4.60%	45.40%	42.30%	4.20	0.93	0.22
Project status report	3.10%	3.10%	3.80%	36.20%	53.80%	4.35	0.93	0.21
Project monitoring plan	2.30%	6.90%	3.80%	36.20%	50.80%	4.26	0.99	0.23
End of project report	2.30%	0.80%	9.20%	29.20%	58.50%	4.41	0.87	0.20
Stakeholders updated	3.10%	5.40%	5.40%	46.90%	39.20%	4.14	0.96	0.23
Effective communication	0.80%	1.50%	0.00%	49.20%	48.50%	4.43	0.66	0.15
Lessons learnt	1.50%	6.20%	6.90%	43.80%	41.50%	4.18	0.92	0.22

PMIS used	4.60%	6.20%	29.20%	31.50%	28.50%	3.73	1.08	0.29
Communication plan	33.80%	21.50%	16.90%	13.10%	14.60%	2.53	1.44	0.57
Average						4.05	0.96	0.25

Results in Table 4.1 indicated that majority respondents at 94.6% (55.6%+40.0%) agreed with the statement that the organization routinely track progress of the project activities to ensure that objectives are met. The statement had a mean score of 4.28 and a standard deviation of 0.79 implying that majority respondents agreed to the statement with low response variation. The results also showed that majority respondents totaling 87.7% (45.4%+42.3%) agreed to the statement that the organization routinely track progress of the project activities against budget. The statement had a mean score of 4.20 and a standard deviation of 0.93 indicating majority respondents agreed to the statement with low response variation. Further, the results indicated that majority respondents at 90% (36.2%+53.8%) agreed to the statement that the project manager submits project status reports to management. The response had a mean score of 4.35 and standard deviation of 0.96 implying that majority respondents agreed to the statement with low response variation. Furthermore, the results showed that majority respondents at 87% (36.2%+50.80%) agreed with the statement that project monitoring plan is developed prior to implementing project. The statement response had a mean of 4.26 and standard deviation of 0.99 implying majority respondents agreed with the statement with low response variation. Additionally, the results indicated that majority respondents at 87.7% (29.2%+58.50%) agreed that end of project report is used for decision making to inform future projects. The statement had a mean of 4.41 and a standard deviation of 0.87 implying majority respondents agreed to the statement with low response variation. This is in line with Luke (2014) who found out that monitoring tracks project progress against time, resources and performance schedules, and identified areas requiring attention and action. This tracking of progress against targets ensures the project completion is within schedule and budget. Monitoring is a short term continuous assessment and takes into consideration project activities and outputs while evaluation looks at outcomes and impact. In addition, results indicated that majority respondents totaling 86.1% (46.9%+39.2%) agreed with the statement that project stakeholders are well informed on project progress as necessary. The statement had a mean of 4.14 and a standard deviation of 0.96 indicating majority respondents agreed to the statement with low response variation.

Moreover, results revealed that majority respondents at 97.7% (49.2%+48.50%) agreed to the statement that project manager is able to communicate effectively with the team and top management. The statement had a mean of 4.43 and a standard deviation of 0.66 which indicates that majority respondents agreed to the statement with low response variation. The results also revealed that majority respondents at 85.3% (43.8%+41.5%) agreed that the project team regularly documents lessons learnt and best practices to inform future projects. The statement had a mean of 4.18 and a standard deviation of 0.98 meaning that most respondents agreed to the statement with low response variation. The results equally revealed that majority respondents at 60% (31.50%+28.50%) agreed that documents/information sharing and storage is done using Project Management Information System (PMIS). The mean of the statement was 3.73 and the standard deviation was 1.08 meaning that majority respondents agreed to the statement with low response variation. Finally, majority of the respondents 27.7% (13.1%+14.6%) agreed that there is a project communication plan for communicating with stakeholders. The statement response mean was 2.53 and the standard deviation was 1.54 implying majority respondents agreed to the statement with low response variation. This concurs with Larson & Gray (2014) who noted that since communication involves giving and receiving

feedback, it is critical in the project cycle. The success of the project will largely depend on how the project manager communicate with the project team, stakeholders and the beneficiaries. A communication plan is important as it outlines information flow to the project stakeholders and forms part of the project plan. Overall, the average mean of the responses was 4.05 indicating that majority of the respondents agreed to the statements in the questionnaire on project technical skills. The standard deviation was 0.96 indicating that responses clustered around the mean response. Nazari and Nurbakhshian (2016) found that communication skills are effective in improving the management process of managers and to achieve the organizational goals. Serhan and Draganov (2016) found that communications skills are essential for addressing the sustainable aspect of construction projects due to their complex nature.

Pinto and Slevin (1987) notes that the typical project manager is charged with successful project results within constraining power, budget and people. They note the need for the project manager to have requisite tools to help transition from strategic to tactical aspects throughout the project cycle. To further succeed, the project manager requires technical and administrative skills as well as good rapport with top management (Pinto & Slevin, 1987, Morgan, 2012). Project success is affected by the level of autonomy and authority that the project manager exerts on the project. Larson and Gray (2014) observes the need for the project manager to have autonomy and authority to make project decisions.

4.2 Content Analysis

The respondents were asked to give reasons why they consider project monitoring and evaluation as critical in project performance. The results are presented in table 4.2.

Table 4.2: Importance of Project Monitoring and Evaluation

Monitoring and evaluation	Themes	Frequency (%)
1	Tracking of budget progress	19
2	To inform future projects	16
2	Identifying problems	10
4	Evaluation of objectives	42
5	Effective resource utilization	13
Total		100

Majority of the respondents (42%) indicated that project monitoring and evaluation is important in determining if the project objectives are being met. Otieno (2000) observed the important role of project monitoring and evaluation when it is timely and professionally done. Since each project is unique, the project monitoring and evaluation plan should be agreed on during the planning phase. According to Mahaney and Lederer (2010), the role of monitoring is to ensure that the project is within expected budget, schedule and quality.

Respondents were asked to provide information on channels of communication available to the project team and stakeholders, and the barriers to effective communication. The results are presented in Table 4.3 and 4.4.

Table 4.3 Channels of communication

Channels of communication	Themes		Frequency (%)
	1	Meetings	10
	2	Emails	7
	3	SMS	42
	4	Reports	17
	5	Cell phone calls	24

Total		100

Majority of the respondents (42%) indicated that SMS is the major channel of communication. Each stakeholder require an effective communication channel as success of a project largely depends on how efficient its communication network is. This communication process that is clear, concise, effective and efficient ought to be available during the project cycle to stakeholders and the team. According to Rajkumar (2010), only 7% of our communication is verbal with 93% being nonverbal and inclusive of tone of voice, posture and facial expressions. As such, the project manager should be aware of both the communications content and the unspoken messages. Project expectations or targets at every project stage should be communicated in an open and honest manner. Hvyari (2006) found that communication significantly contribute to project performance. The PMI reported that among companies with highly effective communication, 80% of projects met their goals, compared to a 52% success rate for those with minimally effective communication. The more effective communicators enjoyed much higher rates of on-time and on-budget performance, as well. Such communication as status meetings should have a regular schedule while others may be impromptu as need arise. A communication plan should clearly detail the communication requirements of each stakeholder, which include what is to be communicated, when, by who, and how it is to be done based on the stakeholder interest and influence in the project.

Respondents were also asked to list down the barriers to effective communication in the community based HIV project. The results are presented in Table 4.4.

Table 4.4: barriers to effective communication

Barriers	Themes	Frequency (%)
1	Language barrier	43
2	Fear of victimization	10
3	Culture	5
4	Age	7
5	Time	11
6	Literacy level	24
Total		100

Language barrier was found to be the major barrier encountered in communication as indicated by majority of the respondents who were 43%. Some of the identified barriers to effective communication according to Rani and Amat (2017) include; logistics, language, technical capability, experience and workload.

4.3 Correlation analysis for project technical skills

Table 4.5 Correlation analysis between project Technical Skills and performance

Variable		
Project Technical Skills	Pearson correlation	.730**
	Sig. (2 tailed)	0.000

Results showed a positive relationship between project technical skills and project performance (rho= 0.730). Phiri (2015) noted that monitoring and evaluation has a directly proportional influence on project performance hence a need for project monitoring and evaluation plan.

4.4 Regression Results for Project Technical Skills
Table 4.6 presents the model fitness for used for regression model in explaining the study phenomena.

Table 4.6: Model Fitness for Project Technical Skills

R	R Square	Adjusted R Square	Std. Error of the Estimate
.730a	0.534	0.53	0.36273

The results in table 4.6 show that project technical skills were found to be satisfactory in explaining project performance. This is supported by coefficient of determination also known as the R square of 53.4%. This means that project technical skills explain 53.4% of the variations in the dependent variable which is project performance. Phiri (2015) showed that technical skills have directly proportional influence on project performance.

Table 4.7 presents the ANOVA results for project technical skills

Table 4.7: ANOVA Results on Project Technical Skills

	Sum of Squares	df	Mean Square	F	Sig.
Regression	19.27	1	19.27	146.456	0.000
Residual	16.841	128	0.132		
Total	36.111	129			

Table 4.7 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant. Further, the results imply that project technical skills as the independent variable is a good predictor of project performance. This was supported by an F statistic of 146.456 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level. Serhan and Draganov (2016) noted that technical skills such as communication is essential for solving the sustainable challenges of a project.

Table 4.8 presents the optimal model for project technical skills.

Table 4.8: Optimal Model for Project Technical Skills

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.605	0.271		2.23	0.027		
Technical skills	0.799	0.066	0.73	12.102	0.000	1.000	1.000

Regression coefficients in Table 4.8 revealed that there was a positive and significant relationship between project technical skills and project performance (r=0.799, p=0.000). This was supported by a calculated t-statistic of 12.102 which is larger than the critical t-statistic of 1.96 (Kothari, 2013). These results agree with Phiri (2015) that monitoring and evaluation influence project performance. Larson and Gray (2014) noted that communication is important in the project cycle as it involves giving directions and receiving feedback. The success of the project will largely depend on how the project manager communicates with all project stakeholders and beneficiaries. A communication plan is important as it outlines information flow to project stakeholders and forms part of the project plan.

The model for project technical skills is

$$Y = 0.605 + 0.799X_1 + \varepsilon$$

Where:

Y= Project Performance

X_1= project technical skills

ε= Error term

Hypothesis testing for project technical skills

The hypothesis to be tested was

H_{01}: Technical skills have no significant influence on performance of community based HIV projects in Kenya.

The hypothesis was tested using simple linear regression (Kothari, 2013) and determined using p-value (Table 4.8). The acceptance/rejection criteria was that if the p value is greater than 0.05, the null hypothesis is not rejected, but if it is less than or equal 0.05, we reject the null hypothesis. The null hypothesis is that critical skills have no significant influence on performance of community based HIV projects in Kenya. Results in Table 4.8 show that the p-value was 0.000. This was supported by a calculated t-statistic of 12.102 which is larger than the critical t-statistic of 1.96. The null hypothesis was therefore rejected. The study therefore adopted the alternative hypothesis that technical skills have a significant influence on performance of community based HIV projects in Kenya.

5.0 Summary Conclusions and Recommendations

5.1 Summary

The objective was to determine the influence of project technical skills on the performance of Community based HIV projects in Kenya. The findings were that project technical skills satisfactorily explained project performance. The ANOVA analysis results showed the model as statistically significant. Results indicated project technical skills as the independent variable is a good predictor of the dependent variable. Overall result showed a positively significant relationship between project technical skills and project performance.

5.2 Conclusion

The study concluded that technical skills have a positive and significant relationship with project performance. Monitoring and evaluation as well as communication skills are an essential component of project implementation. A project manager who effectively communicate with the project team and stakeholders will achieve a successful project as correct, adequate and timely information reaches the audiences. Effective communication channels should be used based on the beneficiaries' literacy level, culture, age and available resources. Monitoring and evaluating of the project's progress should be done in order to identify problems that may arise, and solve them timely. Monitoring and evaluation also ensures that allocated resources are efficiently and effectively utilized and project's objectives are achieved.

5.3 Recommendations

Based on findings that technical skills positively affect project performance, the study recommends that project managers and the project team possess professional qualifications and training in monitoring and evaluation, and effective communication skills. The projects should

also have a monitoring and evaluation plan, and a communication plan or strategy targeting each stakeholder. These should be agreed upon before project execution. Project managers and top management should make communication a priority by developing a communication strategy for the project to address who needs what information and when. Stakeholders should be kept updated on the project progress and these updates should be clear and concise, with clear information on what is expected of them and the timelines. There is also need for a feedback mechanism from the project manager to the team and stakeholders and vice versa. Open communication including clearly articulating setbacks and problems in the project and possible solutions also be done. What's more, communication channels should be diverse including emails, face to face updates, phone calls, short messages to keep the message recipient interested and for them to pay attention to the details. Project managers should strengthen monitoring the project throughout the project cycle to provide timely updates on the project progress, to measure the progress made in achievement of objectives and use of the project budget. Lessons learnt should be identified and documented as the project progresses rather than waiting to identify them at key milestones or at the end of the project as the team may have forgotten them or may be focused in closing the project rather than documenting lessons learnt. Furthermore, documentation of lessons learnt should be included in the projects standard procedures or templates.

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