SUSTAINABILITY OF PUBLIC HEALTH PROJECTS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

Literature points to the fact that many public projects face sustainability related challenges even after completion thus jeopardizing the projects intended objectives. This has, therefore, informed the researcher to conduct a research based on the sustainability of public health projects in Nairobi City County, Kenya. The study three research utilized objectives; to establish effect of stakeholder participation/involvement in the sustainability of public health projects in Nairobi City County, to find out the effect of communication in the sustainability of public health projects in Nairobi City County and investigating the effect of top management support on the sustainability of public health projects in Nairobi City County. A period covering a span of 5 years, from 2011 to 2016 was used in the study. Theories such as stewardship theory, sustainability theory and administrative theory were employed. The study employed exploratory design as the preferred research approach. The study targeted all the 43 senior public health managers in the ministry of health based at the Nairobi County Government, City Hall. The researcher then adopted simple random sampling procedure to select 22 senior health project managers. The study collected primary data from the selected respondents by use of formulated questionnaires. The study conducted pretesting of instruments and a reliability coefficient of 0.57 was found. The study then analyzed the collected data by use of descriptive statistics. Diagnostic tests in the form of normality,

serial correlation and heteroskedasticity were used. It was found that data were normally distributed, there was no serial correlation and heteroskedasticity was not presented. The study also utilized multiple regression analysis method. It found that communication, top management support and stakeholder participation had positive effect on the sustainability of public health project in the County. The study concludes that there was presence of stakeholder participation within the County. The presence of stakeholder participation was also affirmed by the regression results that showed that increase in stakeholder participation lead to sustainable projects. The study concludes that there was presence of effective communication channels in the County. The significance of communication was also evident in the regression results that concluded that the variable had positive relationship with the sustainability of project as such an increase in communication led to sustainable projects. It concluded that top management supported the sustainability of public health projects in the County. The study recommended that the County should engage stakeholders more in all stages to harmonize its objectives and goals with the needs of the stakeholders. The study recommends that the public health project managers should communicate effectively and efficiently regarding cost, time and quality as these factors plays a vital role on sustainable project. The study recommends that top management must be subjected to regular training to enhance their contribution on sustainability of projects as this will sharpen their skills and knowledge to enhance the sustainability and management

of public health related projects within the City County of Nairobi, Kenya.

INTRODUCTION

Key Words: sustainable project, stakeholder participation, communication, management support

In the recent past, sustainable project has been in the focus as a distinct concept used to drive business objectives and economic development agenda in Kenya. It is thus paramount to delve on the factors that contribute to sustainability of public health projects in Nairobi City County. As indicated by Cleland and Gareis (2016), some project sustainability practices that is known to lead into successful public project and ultimately sustainability are; clarification of project mission and goals, supportive role from top management, human resource competency, effective consultation with various project stakeholders, effective communication channels, sufficient financial resources, teamwork, good leaders and client satisfaction among other factors. Many countries both developed and developing have verily struggled with the need for proper sustainability of public and private projects (Strenman, 2012). The concerns that emanates from the lack of project is attributed to poor communication channels, conflict of interest, poor management and leadership skills, inadequate funding, poor infrastructures, corruption related issues, poor feasibility study among other factors. Based on these backdrops, the study looks at the global, regional and local management of public projects.

In UK, the Association for project management (APM) (2016) was formed so as to enhance the sustainability of projects in the country. APM has recently developed an independent standard knowledge that has immensely increased the sustainability of public projects in the country. In order to enhance sustainability of projects, the document has taken a different perspective (Atkinson, 2012). The APM describes that project sustainability as the discipline of managing projects successfully. The country's APM indicates that all projects should be completed safely and within agreed cost, time, and with quality adherence. Therefore, in the UK, project sustainability provides the single point of integrative responsibility needed to ensure that everything on the project is managed effectively to ensure sustainable project is delivered. In Pakistani, in order to promote sustainability of project, the public sector is divided into three main areas of service, the planning and the contractor and consultant (Wang, Zhang, Chau & Anson, 2014). Most of the times these three sectors are involved in public sector development projects in Pakistan. However, a lack of public support, poor infrastructure, communication breakdown, rampant corruption, unskilled staff and lack of enough resources among other factors have hampered the sustainability of many projects in the country. Therefore, the current state of projects in Pakistani public sector organization is questionable.

In Kenya, many public projects fail sustainability tests. Further, sustainability measurement systems are not efficient and effective to overcome sustainability related concerns (Weil, 2015). Many public projects fail in time performance, others fail in cost performance and others fail in quality performance. In 2009, many projects in the country faced obstacles from stakeholders, lack of materials, design and drawing amendment, prolonged decisions, additional works,

handing over, delay of receiving drawings variation in orders given (Strenman, 2012). These together with poor coordination, leadership skills, inefficient feedback mechanisms, and lack of monitoring led to failures of projects in the country. This study is, therefore, significant as some major public health projects have stalled in the city which has led to the suffering of the citizens in their quest to access health related services. As explicitly put, 'a sick nation is unable to play significant role in economic development'. In this context, it is prudent to examine the key factors that could act as indicators to the sustainability of public health projects in Nairobi City County, Kenya.

STATEMENT OF THE PROBLEM

As long as projects are started and right steps are ignored in order to manage them well, the chances of failures are always high (Bredillet, 2015). The argument is supported by the many researches that have been conducted. Ning et al. (2014) emphasized the need to initiate projects that do not negatively impact the future generations through minimal use of finite resources, energy, pollution and waste to make the projects be sustainable. However, Ning et al. (2014) still established that managerial skills and expertise, transparency and accountability, poor planning and evaluation still ruined the success of the initiated projects in China. Their study was limited to use of descriptive statistics while the current study used descriptive statistics as well as regression analysis. Tam (2010) study enjoined the three pillars of project sustainability (social, environmental and economic) to assess positive and reduction of negative sustainability impacts on project to improve success. The study used qualitative data while the current study used quantitative data. His study was also too general as the author failed to identify the social, environmental and economic variables that enhanced project sustainability hence research gap; this therefore, calls for a study of this nature to explicitly use identifiable variables. According to Silvius and Schipper (2014), the devolution presently witnessed in Kenya has resulted to lots of project sustainability concerns in the country. As evidenced, many projects are now under the jurisdiction of Counties which was not the case before the arrival of the new constitution. As such all counties are plagued with myriad of challenges in the sustainability of project that has affected their overall development (Rukunga, 2013). Nairobi City County has also been grappling with issues emanating from sustainable health project as a result of fraudulent practices such corruption, national government influence, coordination related problems emanating from project managers, poor communication, political interference, inadequate consultation, unsatisfactory stakeholders' involvement, inadequate maintenance resources, monitoring and feedback and lack of commitment to planning and control among others (Mwita, 2015). Due to the aforementioned myriad of challenges facing sustainability of health projects in the County as well as a lack of study on the success factors that contributes to sustainable health project and the fact that even studies in developed had mixed conclusions on project' sustainability. The study at hand, therefore, examined the sustainability of public health project in Nairobi City County.

THEORETICAL FRAMEWORK

Sustainability Theory

The theory is fronted by Jenkins (2004). The sustainability theory can be referred as a capacity to maintain some entity during a given period of time. In general, sustainability refers to the property of being sustainable. However, Rosenbaum (1993) defines sustainability as methods, systems and materials that won't harm resources. The long term health of a nation depends on the sustainability of development projects that operate in the country (Amrule, 2013). The aspect of sustainability came to be used on financial resources such as project funds in order to indicate that projects must be used efficiently and effectively in a manner that stakeholders support so that benefit flows are sustainable in the long run, then it's prudent that the various stakeholders should fully be involved coupled with sufficient resources. Sustainability theory instigated the second research objective: To examine the influence of stakeholder participation on the sustainability of public health project in Nairobi City County.

Stewardship Theory

The theory was put forward by Davis, Schoorman and Donaldson (1997). In stewardship theory, the top management of the organizations is considered as the stewards of projects liabilities and is expected to act in the interest of the stakeholders (Mallin, 2007). He further observes that the stewards must take fiduciary position. Stewardship theory thus associates with board's task of lending support to management team (Davis, 1993). In support of the theory, Abdulla and Valentine (2009) note that managers are stewards and leaders delegated duties in interest of shareholders. This theory emphasizes that adequate control held by project managers empowers them to make sure that strategies are in place that could uphold project sustainability. In this study, the theory is applicable and supports the variables of management support of public health projects in Nairobi City County. The project managers, contractors and technicians assist their clients (users) as good stewards to install these projects but they don't turn up to help them when these projects get technical challenges which lead to non- functional sustainable projects within the County (Mwirigi, 2010).

Administrative Theory

The theory was developed by Fayol (1987). The theory is anchored on the attributes of good and sound leadership qualities exercised in organization. In agreement with the theory, Rosenbloom (2016) presents how power, responsibility and authority are distributed in an organization with respect to concrete decision making for the sustainability of project. In the contrary poor management techniques leads to collapse of already existing projects and ultimately the failure of economic growth in the County and the country as a whole. Again the theory resonates with

how the administration or management could motivate the employees to enhance their attachment to goals, missions and objectives of Nairobi City County government thus enhance the management of projects. Consequently, so that sustainability of projects can be ascertained, managerial cum organizational support should be improved. Suffice to say, as result of proper demonstration of good leadership styles, project maturity can be ascertained resulting to sustainable public health project in the county. The study is thus underpinned on this theory.

EMPIRICAL REVIEW

Stakeholder Participation and Sustainability of Public Health Project

In relation to the current study, stakeholder participation is defined as a process where key stakeholders are distinguished, needs are given priority and measures for participation are evaluated and implemented. The literature suggests that the concepts of stakeholder participation and social sustainability development are connected and together can contribute to social change (Innes & Booher, 2014). According to Arnstein (2016), lack of proper participation from the stakeholders could lead to a lack of success in meeting the needs and concerns of citizens and consequently failure to improve quality of decisions making which could thus render the projects unsustainable (Innes & Booher, 2014). Arnstein (2016) indicates that mechanisms to open and realistic participation must be able to protect stakeholders' needs and concerns at the stage of decision making.

Communication and Sustainability of Public Health Project

According to Dewhurst and Thomas (2013), in order to complete projects and make them sustainable, the recommendations may be arrived at to ascertain that each parties involved in the project have a deep comprehension of what is expected of them. Delivering information by means of effective communication is vital to each of the parties involved in sustainable project. The communication skills that are rated high are decision making and solving of problem, keen listening, motivation, meetings, writing, team development and capacity team building, as well as conflict management. The aforementioned communication techniques can be viewed as important skills that a project team essentially needs to communicate effectively about project sustainability (Emmitt & Gorse, 2013).

In Sloan et al. (2013), in order to subdue challenges projects face regarding the complexity of sustainability, effective flow of information from citizen is required and this could be achieved by embracing effective communication across the board. According to Berry and Ladkin's (2011),the responsibility of team responsible for management of projects in most Europe countries were not understood which therefore called for an elaborate active role of the public sector. Again, the information provided by the UK government, such as good practice handbooks, was less known to participants (Dewhurst and Thomas, 2013). This shows the

importance of embracing effective communication channels in order to enhance the sustainability of the public projects with Nairobi City County.

Top Management Support and Sustainability of Public Health Project

Top management support has become a significant factor in public sector's project with the introduction of capability maturity model (PMI, 2013 and Frese and Sauter (2013). The model analyzes projects as an institutional effort rather than a project manager's exercise. An important assumption in this model is the fact that an organization has a direct impact on the way projects are run. According to Besner and Hobbs (2015), top management support highly influences infrastructures, decisions and resources the project managers may opt to use in projects. According to Zwikael and Globerson (2016), the fact that there are many ways in which an organization can give adequate supportive role to project managers, it is vital to focus on the most effective processes. These could include the involvement of the project manager during start up stage, supporting ongoing training sessions, establishing project management office (PMO), developing supportive project organizational structure and defining vivid project success indicators (Zwikael, 2014).

As per the reviewed literature, it is evident that many project managers tend to ignore the different impact supporting processes have on project sustainability. Due to this, they give critical attention to support processes that depicts low impact on project success. For instance, many project managers decide to focus on developing project management procedures rather than defining realistic project objectives. Conversely, management in public sector could enhance project results by channeling more effort in critical top management support processes in order to improve sustainability of projects.

RESEARCH METHODOLOGY

The study preferred usage of exploratory research design over other designs. The study targeted all the senior public health employees in ministry of health based at the head office of County Government of Nairobi City. As per the Kenya National Bureau of Statistics (KNBS, 2017) the total of number of senior health management team who are based at the head office are totaling to 43. The researcher adopted simple random sampling as the sampling procedure to select 22 senior health project managers. The current study formulated questionnaires as the primary research instrument that aided information gathering. The researcher first obtained a consent letter from Kenyatta University. The consent letter was then used to seek permission for data collection from the head office of Nairobi City County. Upon being granted permission, researcher visited the targeted respondents with the assistance of one of the senior employee to explain the essence of the exercise. The respondents were also assured of confidentiality and anonymity. The questionnaires were distributed to the sampled respondents who were honestly willing to respond to the questions. The convenient date and time for picking the questionnaires

was also agreed upon. The data that was gathered by means of questionnaires was cleaned and then coded for completeness in preparation for data analysis. The cleaned data was fed into software known as Statistical Package for Social Sciences (SPSS) version 21 for analysis. The study also used Pearson correlation and regression analysis to compare the association between study variables The Regression model took the form of:

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + ei$$

Where: Y=Sustainability of public health project, $\alpha_0 = \text{constant}$, X_1 =Stakeholder participation, X_2 =Communication, X_3 =Top management support, β_1 , $\beta_{2,\&}\beta_3$ =Coefficients and ei = residual error term.

RESULTS AND DISCUSSIONS

Effect of stakeholder participation on the sustainability of public health project

The first objective was to examine the effect of stakeholder participation on the sustainability of public health project in Nairobi City County. The researcher formulated questions that the respondents were required to state their level of agreement or disagreement with. The results indicated that presence of sufficient involvement of various key stakeholders has led to sustainability of many public health projects as reported by 37% and 26% respondents who agreed and strongly agreed respectively while 16% and 11% disagreed and strongly disagreed with it respectively. The findings are supported by the sustainability theory which articulates for proper involvement of various in all levels of projects in order to enhance sustainability since projects implemented in the Country need to be sustainable in the long run. The study found that the fact that project team has always adhered to addressing stakeholders' needs and concerns has led to the success of most of the projects as said by 32% and 26% respondents who agreed and strongly agreed with the statement respectively while 21% and 16% strongly disagreed and disagreed respectively. The results are in supports of a study done by.

Further the study found that sustainability of most health related projects has been attributed to less conflicts as a result of proper involvement of various stakeholders as reported by 37% and 32% respondents who agreed and strongly agreed with the statement respectively while 16% and 11% disagreed and strongly disagreed with the statement respectively. The results are also attributed to sustainability theory that augers for need for elaborate public participation so as to increase the chances of projects being sustainable.

The study also found that the relationship between the county health project officials and community was cordial as a result of involving their views as indicated by 37% and 32% respondents who agreed and strongly agreed with the statement respectively while 16% disagreed and strongly disagreed with it on a similar representation. The findings are supported by the administrative theory that opines that proper leadership entails the need to embracing the views and opinions of others to enhance success of projects during implementation. The study

found that the project team has always provided forums for dialogue before starting up any health related projects and this was supported by 42% and 26% respondents who agreed and strongly agreed with the statement respectively.

Effect of communication on the sustainability of public health projects

The second objective was to examine the effect of communication on the sustainability of public health projects in Nairobi City County. The researcher formulated questions that the respondents were required to state their level of agreement or disagreement with. The study found that the project team has made sure that information about projects is shared effectively with relevant stakeholders as said by 42% and 32% respondents who agreed and strongly agreed with the statement respectively whereas 16% disagreed with it. The results is also supported by stewardship theory that emphasizes that adequate control held by project managers empowers them to make sure that strategies are in place that could uphold project sustainability and this can only be achieved by embracing effective communication.

It was also found that management team believes that effective flow of information from their offices to the public is key for the achievement of sustainable health projects is reported by 42% and 37% respondents who agreed and strongly agreed respectively. In agreement, another study by Clements and Gido (2012) established that it is of significant value to identify skills required to excommunicate efficiently and effectively to various stakeholders in order to enhance sustainability of public health projects. In support, stewardship theory states that good leadership should embrace effective and efficient communication mechanisms so as to promote understanding and ownership of projects among various stakeholders.

Further, the study found that management has adhered to the usage of both verbal and non verbal communication mechanisms to reach out for the public before project initiation as indicated by 42% and 26% respondents who agreed and strongly agreed with the statement. Sustainability theory also support these findings since it argues for better communication channels that delivers timely and accurate information to all so as to promote the sustainability of initiated projects.

Again the study found that 37% and 26% disagreed and remained neutral respectively that the management has put in place effective mechanisms that could help in solving conflicts that may arise among stakeholder to enhance project sustainability while 16% strongly agreed and agreed with the statement on similar percentage. The findings contradicts another study by Berry and Ladkin (2011) that found that project team should realize that even good projects that are initiated as susceptible to conflicts but that embracing appropriate procedures may help mitigate controversy and conflicts. The results are supported by the administrative theory that attributes good and sound leadership qualities exercised in organization to proper demonstration of good communication skills to motivate various stakeholders in as far as project implementation is concerned.

The study also found that 37% and 26% respondents disagreed and strongly disagreed that the management has always communicated to the public using manual or hand books about projects to be initiated before embarking on main exercise. On the same statement, only 16% and 11% remained neutral and agreed with it respectively. In contrast, Dewhurst and Thomas (2013) suggest that information provision to the public by means of good practice handbooks should be availed to stakeholders so as to enhance communication. The results go against the stewardship theory which articulates for the need for the management to communicate freely using various forms to enhance project sustainability.

Effect of top management support on the sustainability of public health project

The third and last objective was to examine the effect of top management support on the sustainability of public health projects in Nairobi City County. The researcher formulated questions that the respondents were required to state their level of agreement or disagreement with. The study found that management team has made it a tradition to embrace health related projects as an organizational effort rather than managers' exercise as supported by 42% and 26% respondents who strongly agreed and agreed with the statement respectively. Only 16% and 11% disagreed and strongly disagreed with it respectively. The findings are in support of PMI (2013) model that states that adhering to the models helps in analyzing projects as an institutional effort rather than a project manager's exercise. Again it was found that the fact that top managers has influence on tools and resources used by project managers and this has made them to be at the center of all projects to enhance their sustainability and in support of this statement, 53% and 26% strongly agreed and agreed with it respectively.

It was also found that 37%, 21% and another 21% disagreed, strongly disagreed and remained neutral respectively that the top managers have always been subjected to regular training to enhance their contribution to the sustainability of public health projects. The findings contradicts with another study by Anderen et al (2012)which found that success factors are variables such as ongoing training sessions most likely promotes successful implementation of projects. The stewardship theory argues that a resourceful manager should embrace regular education and training for himself or herself as well as the junior staff.

The study established that there is presence of total involvement of senior managers when it come project management and sustainability, and this was supported by 42% and 32% respondents who strongly agreed and agreed respectively. In support, another study by Yeo (2012) emphasizes the need for total involvement of top managers when it comes to public project. In agreement, administrative theory resonates with how the administration or management could motivate the employees by fully getting involved in project management so as to enhance the achievement of goals, missions and objectives in order to enhance the management of projects.

INFERENTIAL STATISTICS

Table 1: Model summary

Model	Model R R Squa		Adjusted R Square	Std. Error of the Estimate			
	.986 ^a	.973	.968	1.84163			
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a. Predictors: (Constant), Top management support, Communication, Stakeholder participation

As presented in table 1, a coefficient of determination is 0.973; this means that 97.3% of the variation in the sustainability of public health projects management can be explained by top management support, communication, and stakeholder participation. This means that there is a presence of positive relationship between independent and dependent variables. The unaccounted for percentage 2.7% can be explained by other variables that were not utilized by the study. The results conforms with another study by Berry and Ladkin's (2011) that found that communication, resources, managerial support and stakeholder involvement has positive relationship with project. Administrative theory also argues for the need for good and sound leadership qualities that encompasses managerial support, effective communication and good listening capacity to enhance sustainability of projects.

Table 2: Analysis of Variance (ANOVA^a)

Me	odel	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1839.231	3	613.077	180.764	.006 ^b
	Residual	50.874	15	3.392		
	Total	1890.105	18			

a. Dependent Variable: Sustainability of public health projects

b. Predictors: (Constant), Top management support, Effective communication, Stakeholder participation

The study used analysis of variance to test if the regression model was a good fit for the data analysis procedures. The ANOVA results in table 2 shows that the significance of the F statistics is .006b (it is actually less than 0.05). This implies that there is a significant relationship between independent variables (top management support, effective communication, and stakeholder participation) and dependent variable (Sustainability of public health projects management). In concurrence, another previous study by Sloan et al., (2013) found that availability of resources, presence of communication channels and involvement of all participants improves the success of projects. The stewardship theory also argues demonstration of better leadership skills by the management so as to enhance project sustainability.

From table of 3, the Unstandardized Beta Coefficients in the regression show that all the tested independent variables had positive association with Sustainability of public health projects. The findings show that all the variables tested were statistically significant with p-values less than 0.05. The study found that stakeholder participation has a p-value of 0.016 which is less than 0.05. The results on stakeholder participation can be interpreted to mean that, X_1 (stakeholder

participation) = 0.965 (unstandardized B coefficient) implied that a unit increase in stakeholder participation could result into a 0.965 increase in sustainability of public health projects. The study also established that communication had a p-value of 0.034 which meant that communication had strong positive association with sustainability of public health projects. Therefore X_2 (communication) = 1.061 (unstandardized B coefficient) implies that a unit increase in communication could result into a 1.061 increase in sustainability of public health projects.

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.625	4.046		2.132	.050
	Stakeholder participation	.965	.149	.499	6.472	.016
	Communication	1.061	.208	.319	5.110	.034
	Top management support	.937	.138	.405	6.777	.002

Table 3: Regression Coefficients

a. Dependent Variable: Sustainability of public health projects

Table 3 finally shows that top management support had p-value of 0.002 which is an indication that it was also positively associated with sustainability of public health projects as the p-value was less than 0.05. Therefore, unstandardized B coefficient of X_3 (Top management support) =0.937; implied that a unit increase in top management support could result into a 0.937 increase in the sustainability of public health projects. The study found a positive constant (8.625) an indication that the regression model is normally distributed.

From the findings, it is clear that communication had the highest relationship with the sustainability of public health projects management in the county. This was followed by stakeholder participation and top management support in same order. Therefore, the regression coefficient results obtained shows that there exists a direct positive and statistical relationship between the independent variables and dependent variables though at different factor levels. In agreement, another study by Arnstein (2016) found that presence of communication flow, employee and public involvement, adequacy of financial resources and support from managements promotes the successful implementation of projects. The findings are supported by both stewardship and administration which both argues for need for exercising of leadership skills (communication and managerial support) at all time to promote the sustainability of public projects.

CONCLUSIONS

Despite the fact that many reviewed literature in the study demonstrated that many organizations ignored adequate stakeholder participation in project related issues that led to unsustainable projects. This study, however, concludes that there was presence of stakeholder participation within the County and this resulted on the sustainability of public health projects hence refuting

the previous assertions. The presence of stakeholder participation in the projects was supported by high agreement levels on the presence of sufficient involvement of key stakeholders, addressing of stakeholders' needs and concerns by project team, and building of cordial relationships between various stakeholders as well as providing forums for dialogue before starting any health related projects. The presence of positive relationship between stakeholder participation and sustainability of projects was also affirmed by regression results that showed that increase in stakeholder participation could lead to sustainable projects.

Further, most researches in the study indicated that many firms failed to effectively communicate project related issues across the organization and also to the public as such projects were marred with sustainability challenges. However, the present study concludes that there was presence of efficient communication channels in the County and this led to the sustainability of public health projects. In support of this conclusion, majority of respondents alluded to the fact that project management team made sure that information about projects was shared effectively, the project team also created communication platforms where public views were incorporated and also adhered to usage of both verbal and nonverbal communication mechanisms to pass project related issues to the public in all stages. The significance of communication was also evident in the regression results which concluded that the variable had statistical positive relationship with the sustainability of public health projects in the County as such an increase in effective communication led to sustainable projects.

Again many of the reviewed empirical studies showed that most top management team only resorted to delegation of project related duties but failed to fully get involved in the step by step sustainability measures. This study, however, concludes that the top management supported the sustainability of public health projects in the County and this promoted the sustainability of public projects. To confirm this, majority of respondents agreed that management team made it a tradition to embrace health related projects as an organizational effort, the management had also embraced critical success project procedures, the management had provided project team with project organizational structure and also there was presence of total involvement of senior managers when it came to project and sustainability. The results resonates with multiple regression results that revealed that top management support was significantly and positively related with the sustainability of public health projects in the County of Nairobi.

RECOMMENDATIONS

The study recommends that the County of Nairobi City should engage the stakeholders more in all stages to align or rather harmonize its objectives and goals with the needs of the stakeholders and reduce resistance and dissonance levels from stakeholder thereby increasing sustainability of public health project. The same involvement should be witnessed in all strategic management all the way from strategic formulation to strategic evaluation stages. Adhering to these could ultimately enhance the full support of projects by all the stakeholders.

The study recommends that the public health project managers should communicate effectively and efficiently regarding cost, time and quality as far as the projects are concerned. These factors play a vital role in the success of sustainable project. As such the project team should be leaders who can communicate effectively and on timely basis with all parties and convince them to follow a sustainable approach so as to enhance the success of a given project. Therefore, successful execution of sustainable projects depends heavily on the project team's capability and ability to communicate effectively to various stakeholders so as to enhance the successful sustainability of projects.

The study recommends that the top management must be subjected to regular training to enhance their contribution to the sustainability of public health projects. Sharpening of their skills and expertise improves the dissemination of rightful skills and knowledge to the project team who will consequently blend with their own skills and knowledge in order to enhance the successful sustainability and management of public health projects within Nairobi City County. This is important because people who are selected to manage major projects should be made to demonstrate sound knowledge and qualification in the management of projects. The top management should also be able to involve project managers on decision making in all stages so as to promote their total and reliable participation during all stages of project management.

REFERENCES

- Agarwal, S. R., & Kalmár, T. (2015). Sustainability in Project Management: Eight principles in practice. *Journal of Project Management*, 11(8), 232-344
- APM (2016). Project Management Body of Knowledge, (5th Edition), APM, UK
- Atkinson, R. (2012). Project management: cost, time and quality, two best guesses and a phenomenon, it is time to accept other success criteria, *International Journal of Project Management*, 17, 337-342
- Bredillet, C., Tywoniak, S., & Dwivedula, R. (2015). What is a good project manager? An Aristotelian perspective. *International Journal of Project Management*, 33(2), 254-266.
- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management review*, 22(1), 20-47.
- Dicke, L.A. (2002). Ensuring accountability in human services contracting: Can stewardship theory fill the bill?, *American Review of Public Administration*, (32) 480-95
- Fayol, H. (1987). General and industrial management: Henri Fayol's classic revised by Irwin Gray. Belmont, CA: David S.
- Gareis, R. (2013). Re-Thinking Project Initiation and Project Management by Considering Principles of Sustainable Development. In: Silvius, A.J.G. & Tharp J., eds. Sustainability Integration for Effective Project Management, Hershey: IGI Global, 2(6), 129-143.
- Innes, H.,& Booher, B. W. (2014). Community engagement: participation on whose terms?. *Australian Journal of Political Science*, 42(3), 441-454.

- Isabalija, S. R., Mayoka, K. G., Rwashana, A. S., &Mbarika, V. W. (2011).Factors affecting adoption, implementation and sustainability of telemedicine information systems in Uganda. *Journal of Health Informatics in Developing Countries*, 5(2).
- Jenkins, H. (2004). A critique of conventional CSR theory: An SME perspective. Journal of General Management, 29(4), 37-57.
- Kothari, C. R. (2010). *Research methodology, Methods and Techniques*, 2nd Revised Edition, New Delhi: New Age International (P) LTD Publishers
- Mallin, K. (2007). Does CEO duality really affect corporate performance? *Corporate Governance: An International Review*, 15(6), 1203-1214.
- Mwita, P., Kube, A., & Leo, O. (2012). Conditional CAPM in project management: a quantile auto-regression approach. *Journal of Finance*, 2(3), 344-445
- Rosenbloom, D. H. (2016). Public Administrative Theory and the Separation of Powers. In *The Constitutional School of American Public Administration* (pp. 78-94). Routledge.
- Shediac-Rizkallah, M. C., & Bone, L. R. (2018). Planning for the sustainability of communitybased health programs: conceptual frameworks and future directions for research, practice and policy. *Health education research*, *13*(1), 87-108.
- Silvius, A. J., & Schipper, R. P. (2014). Sustainability in project management: A literature review and impact analysis. *Social Business*, 4(1), 63-96.
- Spangler, W. D. (2012). Validity of questionnaire and TAT measures of need for achievement: Two meta-analyses. *Psychological Bulletin*, *112*(1), 140.
- Strenman, J. D. (2012). System dynamics modelling for project management' Sloan School Students, 3rd Ed, Pearson Education Limited, England
- Sweeney, J. (2011). Top five communication skills for project managers.[online]. UK: Projectsmart.
- Vandevoorde, S., & Vanhoucke, M. (2016). A comparison of different project duration forecasting methods using earned value metrics. *International journal of project* management, 24(4), 289-302
- Wang, H. J., Zhang, J. P., Chau, K. W., & Anson, M. (2014). 4D dynamic management for construction planning and resource utilization. *Automation in Construction*, 13(5), 575-589.
- Weil, D. (2015). The contemporary industrial relations system in construction: Analysis, observations and speculations. *Labor history*, 46(4), 447-471.