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Effect of Project Resources on Sustainability of Early Childhood Development Projects: Case of Baby-Friendly Community Initiative in Dagoretti North Constituency Nairobi County Kenya

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Abstract
The purpose of the study was to find out the effect of project resources on sustainability of Early Childhood Development (ECD) projects, a case of the Baby-Friendly Community Initiative (BFCI) project in Dagoretti North Constituency Nairobi County, Kenya. The study used a descriptive survey design. The target population was made up of 507 BFCI project stakeholders while the sample size was 211. The target population comprised five hundred project beneficiaries, two lead mothers in charge of the mother-to-mother groups, two government officials, two Ministry of Health staff, and one staff from the implementing partner of the project. The sample size of the project beneficiaries was derived using the Yamane formula. Stratified sampling was used to get study participants from each village representing a stratum. Proportionate stratification was utilized to obtain the sample size of each stratum. This implied that each stratum had an equivalent sampling fraction. The other study participants were not sampled due to their low number. The researchers used self-administered questionnaires to collect quantitative data while an interview guide was used to collect qualitative data. Percentages, frequencies, mean, and standard deviation were the descriptive statistics used. Correlation analysis was used for inferential statistics. Collected data was analyzed with the aid of the Statistical Package for Social Sciences (SPSS Version 23.0) and triangulated qualitative data was analyzed through themes and content analysis. The results show that there is a moderate relationship between project resources and sustainability of ECD projects with correlation value of ($r=0.433$, $P<0.000$). Hence, it was recommended that project stakeholders should put on place resource mobilization strategies to ensure that projects do not lack resources. The in-depth discussions done with the key informants in the study also supported the results that project resources are crucial to the sustainability of projects. The study recommends that project stakeholders should put in place measures that ensure project resources are availed for sustainability of projects.

Key words: Kenya, Nairobi, Dagoretti North, Project resources, early childhood development projects, project sustainability

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Introduction

The huge investments in terms of time and resources that stakeholders put together around the globe provides the desire of ensuring that the project are sustainable, especially when the donors and government exit and cease to support the projects. Sustainable projects may be seen as those projects whose actions enable implementers to meet current needs without interfering with the ability of the future generations to meet their own needs (Silvius & Schipper, 2019). The third goal of Sustainable Development Goals (SDGs) aims at ensuring healthy lives and encouraging well-being for all. This precise goal by the UN recognizes the critical role good health has to play in the attainment of the Sustainable Development Goals 2030. This goal is directly linked to other goals like poverty obliteration, ending of hunger and nutrition improvement (Agbedahin, 2019).

Sustainability is to be achieved through various levels that include; economical level, institutional, infrastructural and community sustainability (Silvius & Schipper, 2019). According to (Nordqvist, Timpka, & Lindqvist, 2009) sustainability is based on the relevance of the project, acceptance from the community members and other stakeholders, project practicability and adaptableness of the project. These can be determined through conducting risk analysis, economic analysis, development of the human resource, community analysis and environmental analysis. Requirements for funding need close scrutiny to establish the scenario and those funding the project i.e. county governments and NGOs (Olukotun, 2008).

It is important for those people engaged in projects to think of the future (Lander, Kronenberg, & Ross, 2016) the authors state that when projects are implemented, they should be developed having in mind forthcoming generations. By developing projects with the aim of assisting future users, the project's plan of sustainability is also designed. Through this, sustainable project reduces instances of communities experiencing the same problems of project collapse at a later time thus resulting in both social and economic sustainability and enhance productivity in other projects (Lander, Kronenberg, & Ross, 2016). According to (Ishola & Cekan, 2019). Sustainability of projects is usually constrained by various factors like inadequacy of project resources like lack of adequate funding, lack of material resources, inadequate human resources, and lack of qualified human resources. Stakeholders need to be involved in every project phase and also ensuring proper planning and accountability of project resources.

The Kenyan government in collaboration with various stakeholders has made commendable steps in implementing sustainable ECD projects (Buysee & Peisner-Feinberg, 2013). Even though implementing ECD projects can be an intimidating endeavor. With this recognition, the government has put in place systems and mechanisms through which various organizations and communities assist in the process of developing and implementing projects related to ECD (Nganga, 2009). These non-governmental organizations also assist in

development and implementation ECD policies. The government on its part is tasked with driving the agenda related to ECD projects through various ministries. These ministries include but not limited to the Ministry of Education, Ministry of Health, Ministry of Home Affairs, Ministry of Water, Ministry of Planning, and National Development.

Many ECD projects in both the health and educational sectors in Kenya have perennially failed to pass the sustainability test (Marczak, O'Rourke, & Shephard, 2018). Marczak, O'Rourke, & Shephard, (2018) attribute this to how the Ministry of Health in collaboration with other partners have failed to set the sustainable agenda of ECD projects in the area of health. For instance, the Ministry of health integrates the aspect of WASH and early childhood development in the various projects that target children. But still many children still do not have access to clean water and proper hygiene (Marczak, O'Rourke, & Shephard, 2018).

The use of local administration and local communities in carrying out activities is still very low hence most projects have not been integrated to the communities where they are implemented. While the ministry is charged with initiating and supervising projects related to maternal and child health care, ensure adequate community mobilization on matters of children's health, and cohesive supervision of childhood illnesses and other essential areas, (Gewa, Oguttu, & Yandell, 2011), point out that many children and caregivers still do not get access to basic health. As of now, the ministry can do better in ensuring the sustainability projects targeting children and caregivers like; promoting safe delivery of children, reducing communicable disease like malaria, and reducing malnourishment among children under five. ECD health projects still face logjams like lack of infrastructure such as hospital facilities and qualified personnel which impact the sustainability of this projects (Gewa, Oguttu, & Yandell, 2011).

Apart from the government, religious organizations and non-governmental organizations, are prominently involved in delivering ECD health projects interventions. These organizations help to fill the gap left by the government. Organizations like World Vision, Save the Children, Childfund Kenya, and the Aga Khan Foundation have helped to initiate ECD projects that have improved the living conditions of millions of children (Mwaura & Marfo, 2011). Religious organizations have been instrumental in inaugurated health projects by pulling resources like donating land for the development of hospitals. These have helped to ensure that children get access to health services. Since most non-governmental organizations depend on donor funding to run their activities, most of the projects initiated by them fail to be sustainable immediately donor funding is not provided (Mwaura & Marfo, 2011). This calls for urgent attention to identify factors that may affect the sustainability of projects.

Statement of the Problem

Sustainability has over time evolved from one domain of environmental space to other spheres like the social and economic space. (Block, Gremmen, & Wesselink, 2018), observe that the challenge of attaining project sustainability can be daunting task. They attribute this to the nature of sustainability as a multi-pronged concept whose attainability encounters myriad obstacles, ranging from inadequate knowledge, high number of stakeholders involved, enormous resources needed, to interconnectedness of variables influencing sustainability. These gaps that have been highlighted imply that many projects have failed the sustainability test. Projects in the ECD space are no different. To highlight the magnitude of this problem, in Malawi, the world bank conducted a mapping exercise of 690 community-based childhood centers in four districts and

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found that more than half had closed (Neuman, McConnell, & Kholowa, 2019). Meaning that the ECD projects had failed the sustainability test. The ripple effect of this was that more 500,000 children who were depending on these centers for nutrition, early stimulation, learning, and nurturing care, had to drop out as indicated from the mapping exercise.

The challenge of unsustainable projects in the ECD circle is a concern of 8 out of 10 donor and government funded projects irrespective of the setting, target population or the indicators to be attained (Lipman, 2020). This can be attributed to the fact that different dynamics interplay during project implementation to determine sustainability. Hence, the scholars are tasked with playing a role through research in engaging in the conversation on sustainability of projects. This can assist us to understand diverse factors affecting sustainability of projects in different settings including specific projects in the ECD sector. This also can also assist in improving the body of knowledge on sustainability of ECD projects through identification of gaps in literature on determinants of sustainability of ECD projects. It is against the background that this study aimed to find out the effect of project resources on sustainability of early childhood development projects with a focus on the baby friendly community initiative project in Dagoretti North Constituency, Nairobi County, Kenya.

Theoretical Foundation of the Study

Theory of Sustainability

The United Nations (UN) has continued to play an instrumental role in popularizing the Sustainability Theory (Clark, 2007). Based on this theory, sustainability is considered as the capacity of a project to continuously maintain a certain level of outcomes over time with little interruption. The sustainability theory is pegged on the assumption that all resources are finite, as a result the utilization of these resource whether natural or not should be done in a manner that bears in mind that future generations will require the same resources (Harrington, 2018). In this theory, sustainability is perceived to have three main pillars, the social aspect, the ecological aspect, and the economic aspect. On the economic front, natural and financial resources should be utilized sustainably; on the social aspect, for sustainability to be achieved, social systems should at all times strive to maintain human dignity; and the ecological pillar of sustainability strives to ensure ecological veracity and biological spaces are used sustainably while also maintaining diversity (Pelsa, Pelsa, & Balina, 2020).

This study employs the theory of sustainability in the sense that all ECD projects should be able to continuously benefit caregivers and children even after the exit of donors. In order to achieve this as per the theory, all the resources available whether financial, material, human resources, learning institutions, health facilities, or WASH facilities should be used in a manner that upholds human dignity, maintains transparency in reporting and ensures that there is continuous effort to improve the available social structures and systems.

Project Resources and Sustainability of Early Childhood Development Projects

Insufficient resources can to a great extent undermine the sustainability of projects. This is true since it is common practice for many projects to have adequate resources in the initiation and execution stages. This though is not the case during the sustainability stage after the exit of the resource providers when the project is expected to be self-sustaining. (Dobrovolskienė & Tamošiūnienė, 2018), define project resources as all that is needed to ensure that project

activities are carried out. (Dunne & Dunne, 2011), on the other hand, define project resources as all productive aspects that are required to accomplish project tasks and attain desired results. The authors go ahead to note that project resources can be divided into three main groups. Financial resources, material resources, and human resources. All these resources have an interdependent relationship and often rely on each other in different phases of the project (Dobrovolskienė & Tamošiūnienė, 2018)

People play an integral part in the success of any project. The viewpoint of most organizations is that people are resources, and project activities cannot be carried out without them. In a study on "Scaling early child development: what are the barriers and enablers?" (Cavallera, Tomlinson, Radner, Coetzee, Daelmans, & Hughes, 2019), noted that human resources were seen not only as central for the successful planning and implementation of ECD projects but participants in the study agreed that the capacity of human resources in the ECD space influenced service quality during implementation and the general outcomes on children. Despite this understanding, (Momeni & Martinsuo, 2018), noted that it is common practice to find unqualified human resources being actively involved in project implementation of ECD projects.

The role played by humans as project resources cannot be understated. This is even though human resources are often strained due to the lack of enough qualified human resources to implement integrated programs. It is common to get human resources being scarce and hard-pressed in high-poverty regions hence making it hard to sustain ECD projects (Malete, 2013). As much as it is unanimously agreed that it is important to reinforce the parent-child interaction when implementing ECD projects, the challenge of effectively training, managing, and supporting human resources is a major bottleneck in sustaining projects that target parents and children both in the health and educational sector (Cavallera, Tomlinson, Radner, Coetzee, Daelmans, & Hughes, 2019). (Rudolph, 2019), agrees with this observation and notes that the problem of human resources and its impact on the sustainability of ECD projects is compounded by the lack of training resources, cultural factors in the intervention settings, and also the intervention content which is mostly integrated.

Financial resources are imperative in the sustainability of any project. Financial resources are at the core of any project activities without which, many activities fail to take place. Financial resources are funds required by project implementers to purchase the needed equipment and apparatus necessary for the implementation of projects and also meet the daily costs related to the project like salaries and transport (Lander, Kronenberg, & Ross, 2016). Johns & Baltussen, (2020), while discussing financial resources mention that cost consideration is essential when planning for scaling up of activities in ECD projects as in any project. This they point out as observed in a study "Accounting for the cost of scaling-up health interventions," where they noted that financial talk was often ignored and as projects expanded to great heights, lack of sufficient budgeting and planning for financial resources led to collapse and failure of projects. In the same study, respondents pointed out that for projects to ensure financial sustainability, stakeholders should think about social entrepreneurship which can go a long way in proving project funds to support the sustainability of project activities.

Lack of long-term commitment from donors, government, and other funding bodies to provide long-term resources has led to paralysis of project activities whenever the provision of financial resources is halted. Wardeh & Marques, (2021), note that many children especially in

disadvantaged communities like refugee camps are the most affected when project activities are not sustainable. To tackle this challenge, (Silvius & Tharp, 2013) state that project leaders and other stakeholders need to work on ensuring stable, continuous financial support by diversifying funding through providing services at a subsidized fee for the services that can be charged, casting wider nets when mobilizing for resources, and reducing financial wastage through improving accountability. Commenting on the role of financial resources on the sustainability of ECD projects, (Silvius & Schipper, 2019) suggest that for project managers to solve the financial resource mobilization challenge, there is a need for understanding the resource mobilization cycle. This is the tool that can be used to help project managers to come up with a plan on resource mobilization, monitor the process, and develop different activities that can be executed to successfully mobilize resources. All this is done in three phases; the planning – assessment, and design which is the first phase, the acting and implementing phase, and eventually the revision and the mobilization strategy after reflecting on the lessons (Ozawa, 2020).

Material and physical resources on the other hand are considered to occupy space, have value, and play a key role in the daily running of the organization. The kind of physical properties ECD projects have and their quantities to a large extend play a role in the sustainability of the ECD projects. Ge & Li, (2019), noted that ECD projects that are to a large extend service-based often use physical resources to expedite the provision of these services. Logie & Roopnarine, (2013), noted that facilities that stimulate children and enable them to optimize their development play a key role in enhancing the experiences and the acquisition of new knowledge. He goes on to advise that early childhood development projects must be adjusted to the characteristics of children while at the same time putting into consideration all aspects of child development. Buysse and Peisner-Feinberg (2013) agree with this observation and point out that child-friendly spaces with good facilities can be used to bring together both adults and children who can build community networks and also mobilize each other to take care of children with special needs.

Facilities are crucial in service delivery, Ishola & Cekan, (2019) observed that health facilities are instrumental in the successful implementation of health projects. Both the facilities and human resources at these facilities come in handy when implementing the said projects. They point out that deficiencies in infrastructure and services at the health facilities keep communities at a disadvantaged position distinctly in rural areas and urban informal settlements where most health facilities are underdeveloped. Patrick & Kingsley, (2017), while assessing health projects in Australia noted that constrained resources were a leading cause of unsustainability in projects. This means that maternal and child health projects being implemented in such health facilities with limited resources face an insurmountable task to be sustainable. This means that maternal and child health projects being implemented in such health facilities with limited resources face an insurmountable task to be sustainable. A similar trend was observed on ECD educational programs that were operating in areas where schools were only makeshift structures that could be affected by adverse weather conditions (Rahman, Surkan, Cayetano, Rwagatare, & Dickson, 2013).

Conceptual Framework

Mugenda, (2003) defined a conceptual framework as a scheme of concepts (variables) which when operationalized helps the researcher achieve the set objectives. This study sought to

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investigate the effect of project resources on sustainability of ECD projects with a focus on the BFCI project in Dagoretti North Constituency, Nairobi County, Kenya. The framework indicates the relationship that exists between the independent variable (project resources) and the dependent variable (sustainability of ECD projects). Figure 1 shows the conceptual framework of this study.

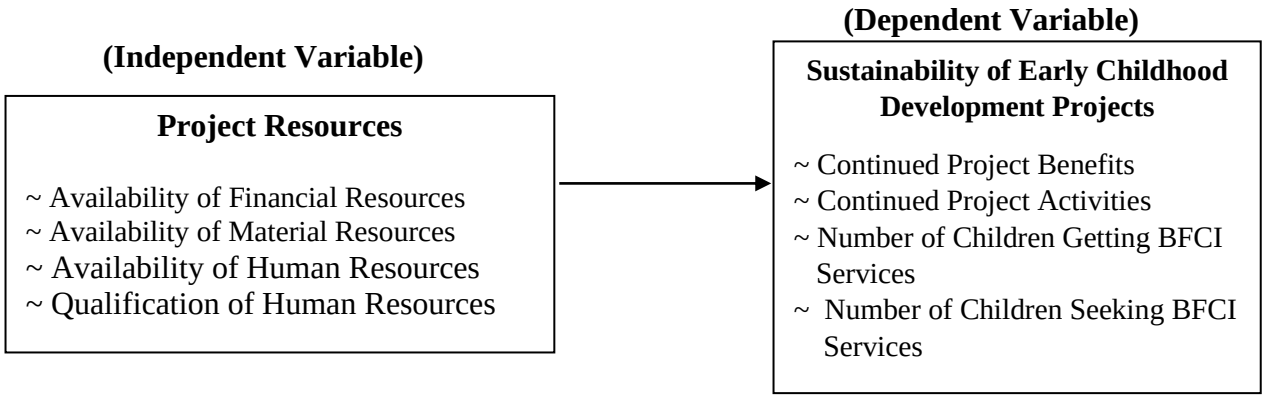

Figure 1: Conceptual Framework
Source: Field Data 2022

Methodology

Research Design

The study used a descriptive survey design which was helpful in obtaining data from a large number of participants who took part in the study. This design helps to provide insight to the prevailing situations and state of events related to a specific research problem. Leedy & Ormrod, (2020) point out that a descriptive study cannot irrefutably ascertain answers to why. Descriptive research design was utilized to get information regarding the prevailing position of sustainability of ECD projects and to explain "what existed" concerning variables or circumstances in the situation.

Target Population

The target population as the complete group of persons or matters from which researcher intents to take a broad view of the conclusions of the research. The target population in most cases is made up of individuals or matters with varying characteristics and it is also referred to as the theoretical population. The research targeted 500 beneficiaries as per records from the Ministry of Health: Department of Children at Riruta Health Centre data recorded in the "BFCI Form 3 – Primary HealthCare Facility Report." The beneficiaries are spread out through three villages; Muslim (227), Precious (125), and Kanungaga (163). In addition to the beneficiaries, two lead mothers in charge of the mother-to-mother groups, two government officials, two Ministry of Health staff (Ministry of Health) and one staff from the implementing partner of the project were involved in the study.

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Table 1: Target Population

Category		Population
Project Beneficiaries	Muslim Village	227
	Precious Village	125
	Kanungaga Village	148
BFCI Stakeholders	Lead Mothers	2
	Government officials	2
	MoH staff	2
	Implementing partner staff	1
TOTAL		**507**

Source: BFCI Form 3 – Primary HealthCare Facility Report

Sample Size

According to (McNeill & Chapman, 2005), sampling is the statistical procedure of choosing a subgroup (known as a "sample") of a populace of interest with an aim of making observations and statistical extrapolations about that population. In this section, the sampling procedure and the sample size are discussed. A sample is a smaller representation or subgroup attained from the available population (Mugenda, 2003). The study adopted the stratified sampling technique. This is a probabilistic sampling technique where the entire population is divided into subgroups or strata after which the sample is randomly selected proportionally from each stratum. The study used the following formula proposed by Yamane (Adam, 2020), to determine the sample size of the project recipients; Yamane (1973) formulae

$n = N/ (1+N^*) (e)^2$

Where n = sample size

N = the population size

e = the acceptable sampling error (7%) at 93% confidence level

Thus;

$n = 500/ (1+500) (0.07)^2$

n =204

To determine the sample size from each stratum, proportionate stratification was used. By means of proportional stratification, this ensures that the sample size from each stratum is proportional to the population size of the stratum (Saini & Kumar, 2018). Strata sample sizes are calculated using the following formula:

$nh = (Nh / N) * n$

where nh is the sample size for stratum h,

Nh is the population size for stratum h,

N is total population size,

and n is total sample size.

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Table 2: Sample Size Table

Category		Population	Sample Size
Project Beneficiaries	Muslim Village	227	93
	Precious Village	125	51
	Kanungaga Village	148	60
BFCI Stakeholders	Lead Mothers	2	2
	Government officials	2	2
	MoH staff	2	2
	Implementing partner staff	1	1
TOTAL		**507**	**211**

Source: Field Data 2022

Sampling Procedure

The study used a stratified sampling technique to select beneficiaries depending on the villages they currently reside in Dagoretti North Constituency; Nairobi County, Kenya. Each village in the study formed a stratum. Simple random sampling of participants from each stratum was done to get participants of the study. This was through assigning beneficiaries' random numbers followed by creation of a random number table from which the participants were selected. Proportional allocation (nh = (Nh / N) * n) of sample size was used to get the number of participants from each village. Stratified sampling was used in the study since it allowed the researcher to get representatives from all the villages that are covered by the ECD project that was being implemented in the study site. From the possible 500 target population, simple random sampling was used to get a total of 204 project recipients. Due to their low number, the other 7 BFCI stakeholders were not sampled. The total number of study participants was 211.

Research Instruments

The study used a questionnaire to collect quantitative data while qualitative data was collected using an interview guide. (Mugenda, 2003) defined a questionnaire as a research instrument with various questions which helps a researcher to gather information on a specific topic from respondents. Questionnaires can be easily standardized and this helps to check on reliability (Fowler, 2019). The questionnaire comprised of closed-ended statements with each question targeting specific research questions. The design of the questions was guided by the outlined objectives of the study. A respondent was required to fill all parts. The first part had respondents' background data while part the other parts had items covering the objectives of the study having a five-point Likert scale. Interview schedules were used to obtain information from key informants in the project. In-depth interviews ensure exhaustive and comprehensive information is obtained (Montgomery, 2000). In-depth interviews permit the researcher to get an insight into participants' viewpoints and their understandings through continual one on one encounters (Hicks, Schmeidler, & Kirchner, 2020).

Questionnaire

The questionnaire was divided into three sections comprising of structured questions. Section A was comprised of personal information of the respondent such as age, gender, and education

level. Section B was composed of questions based on the indicators of project resources such as; availability of financial resources, availability of material resources, availability of human resources, and qualification of human resources. Section C questions were based on the indicators of project sustainability such as; continued project benefits, continued project activities, number of children getting BFCI services, and number of children seeking BFCI services.

Interview Guide

The interview guide was utilized to collect qualitative data from the key informants of the study who included two lead mothers who are in charge of the beneficiaries at the community level, two government officials, two Ministry of Health officials, and one implementing partner staff. The guide was instrumental in getting the views of these key stakeholders on project champions.

Pilot Testing of Research Instrument

The researchers conducted a pilot test. Pilot testing is tryout of a research study, allowing the researcher to test the research approach with a small number of participants before carry out the main study (Mat Roni, Merga, & Morris, 2019). Questionnaire's pilot testing was done by randomly selecting 20 respondents from a population that did participate in the real study. The selection of the piloting respondents is informed by (Mugenda, 2003) theory, who indicated that piloting sample should be between 1 % and 10 % of the study sample, depending on the study sample size.

The pilot testing was carried out on an ongoing ECD project that was being implemented in Dagoretti South Constituency Nairobi County because the population of this project shared similar characteristics with those of Dagoretti North Constituency. According to (White & McBurney, 2013), the pilot testing questionnaire was designed as open-ended questions to help identify other research areas that could be added to the questionnaire. The questionnaire was administered by the researchers, allowing explanation of queries as thought necessary and assess the respondents' understanding of the questions of research. The questionnaire was drawn to add in the feedback from the pilot respondents so as to eliminate ambiguity, inconsistency or redundancy. The researcher involved two experts who are the researcher's supervisor, and lead project managers to check the piloted instruments until such a time that they approved the questionnaires to be capable of getting the required data.

Validity of the Research Instruments

According to (Carmines & Zeller, 2008), validity is simply the means by which a test or an instrument is able to accurately measure what it's supposed to. They go on to point out that validity helps to strengthen conclusions, inferences, and or propositions. Content validity of the questionnaire was tested by carrying out a pilot on the instruments. Any ambiguity and suggestions noted from the pilot study were corrected on the questionnaires before the actual study. The supervisor was also instrumental in checking both the construct and content validity.

Reliability of the Research Instruments

Carmines & Zeller, (2008) defined reliability is a measure of stability or consistency of test scores, the degree to which the instrument being used in the research gives consistent data under

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the same condition when the respondents used are the same. The reliability of this study was tested through Cronbach's Alpha which was used to measures the internal reliability. (Litwin, 2020) points out that Cronbach's alpha reliability coefficient usually ranges between 0 (when no variance is reliable) and 1 (when all variance is reliable). When the coefficient is closer to 1.0, this shows that the internal consistency of the items in the scale is very high. An alpha (α) score of 0.70 or higher is considered satisfactory (Kirk & Miller, 2005). The SPSS application was used to calculate this reliability. The pilot study was also helpful in testing the reliability of the instruments. The Cronbach Alpha for this study was 0.816 which was considered as an excellent level of internal consistency.

Data Collection Procedures

The process started by the researchers obtaining a letter of approval from the university that allowed the researcher go to the field. On top of this, the researchers sought a research permit from both National Commission for Science, Technology and Innovation (NACOSTI) and the Nairobi County Commission authorizing the study to go ahead. The data that was used in this study was collected by the researchers with the support of well-trained research assistants who administered the questionnaires after intensive training.

The researchers personally conducted the in-depth interviews in the qualitative phase with the key informants. Prior to this, the researchers carried out pilot collection of data to test validity and reliability. The questionnaires mainly consisted of closed ended statements. The researchers also collected secondary data which helped to supplement the primary data.

Data Analysis Techniques

The process started with the verification of all the questionnaires to ascertain that all questions had been dully filled. This helped identify unanswered questions. The quantitative data that was collected in this study was analyzed through descriptive statistical methods and inferential statistics. These was through analysis of distribution, central tendency, dispersion, correlation, and regression. Statistical Package for Social Science (SPSS Version 23.0) was used to analyze the data collected. Qualitative data was analyzed through themes and content analysis. Data was presented through use of frequency tables and narrative analysis, while correlation analysis was used for inferential statistics

Ethical Considerations

Commenting on ethics, (di Norcia, 2006) defined ethics as a way of distinguishing between that which is acceptable behavior and that which unacceptable behavior in a scientific study. The researcher considered four critical ethical practices in addition to others. First, confidentiality was observed through the safeguarding of confidential information from the participant. Second, informed consent was administered to ensure the voluntary involvement of study participants in the research study. Thirdly, through truthful and authentic reporting of data, outcomes, and the avoidance of misrepresentation, or distortion of data was done to maintain the integrity of the research. Lastly, all the intellectual property that contributed to this study was credited through referencing and citation. Study participants were also informed that the information collected was only to be used for academic purposes.

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Findings and Discussions

Questionnaire Return Rate

A total of 204 questionnaires were administered to project beneficiaries in the study. 2 interviews were administered to the lead mothers involved in the project, 2 interviews for the government officials, 2 interviews for the MoH staff, and 1 interview for the implementing partner staff. Table 3 shows the return rate of the questionnaires that were administered to the study participants.

Table 3: Questionnaire Response Return Rate

Category	Frequency Returned	Percentage (%)
Returned and completely filled	192	94.12
Not returned	12	5.88
Total	**204**	**100**

Source: Field Data 2022

Table 3 shows that the response rate from project beneficiaries was 94.12 %. Overall, the return rate from the participants was 94.12 % was considered as sufficient for data analysis as outlined by (Mugenda, 2003) who recommend that a response rate of 50% can be used for data analysis.

Interview Guide Completion Rate

Table 4 shows the completion rate of the interview guide that were administered to the study participants.

Table 4: Interview Guide Response Return Rate

Category	Sample Size	Interviews Carried Out	Percentage (%)
Lead Mothers	2	2	100
MoH Staff	2	2	100
Government officials	2	2	100
Implementing partner staff	1	1	100
TOTAL	**7**	**7**	**100**

Source: Field Data 2022

Table 4 shows that all the Lead mothers, Ministry of Health (MoH) officials, government officials and the implementing partner staff involved in the study were able to respond to the interview guide. implementing partner staff involved in the study were able to respond to the interview guide.

Demographic Characteristics of Respondents

Gender

Table 5 shows that most of the respondents were female at 178 with project beneficiaries accounting for 173 of this number. This implies that most ECD projects target women who were mostly the main caregivers of children. This is consistent with (Emilsen & Koch, 2010) who observed that women were more engaged and involved in ECD projects as compared to men.

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This ranged from the beneficiaries to the people implementing the projects. Due to their role, the leads interviewed were female. On the other hand, both the MoH staff and the government officials interviewed had an equal representation of male and female of one each. Only one staff of the implementing partner was interviewed who was female.

Table 5: Distribution of Respondents According to Gender

Category	Female	Male	Total	%
Project beneficiaries	173	19	192	96
Lead Mothers	2	00	1	1
MoH Staff	1	1	1	1
Government officials	1	1	1	1
Implementing partner staff	1	00	1	1
TOTAL	**178**	**21**	**199**	**100**

Source: Field Data 2022

Level of Education

Findings in Table 6 show that majority of the respondents in the study, 44.2%, managed to complete secondary school. This group is followed by respondents who did not manage to complete primary schooling with this group representing 21.6% of the respondents. 20 respondents who have college/university education managed to take part in the study. This number represented 10.1 % of the respondents. The percentage of respondents who have not completed secondary school and those who have not completed primary schooling stood at 20.6% and 3.5% respectively.

Table 6: Distribution of Respondents According to Level of Education

Category	Frequency	Percentage
None	00	0.00
Primary school not completed	7	3.5
Primary school completed	43	21.6
Secondary school not completed	41	20.6
Secondary school completed	88	44.2
College/university and above	20	10.1
TOTAL	**199**	**100**

Source: Field Data 2022

Project Resources and Sustainability of ECD Projects

To establish the influence of project resources on the sustainability of early childhood development projects, the participants were invited to indicate the extent to which project resources influence the sustainability of ECD projects in Dagoretti North Constituency. The indicators in question were; financial resources, human resources, and human resources. The results are presented in the following section.

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Table 7: Project Resources and Sustainability of ECD Projects

	Statement	1		2		3		4		5			
		F	%	F	%	F	%	F	%	F	%	MEAN	SD
1	Project funds play an important role in the sustainability of the ECD project	8	4.2	5	2.6	6	3.1	58	30.2	115	59.9	4.4	0.981
2	Project finances are readily available for the implementation of the ECD project activities. This can be seen in how frequent the activities are held	6	3.1	00	00	00	00	38	19.8	148	77.1	4.7	0.773
3	Project physical resources are essential for the sustainability of the ECD project	7	3.6	11	5.7	9	4.7	55	28.6	110	57.3	4.3	1.045
4	. The ECD project has adequate physical resources to support the sustainability of the project activities	6	3.1	12	6.3	13	6.8	55	28.6	106	55.2	4.3	1.042
5	The ECD project has adequate equipment to support the sustainability of the project activities.	13	6.8	7	3.6	5	2.6	38	19.8	129	67.2	4.4	1.150
6	Good physical resources like day-cares and health facilities play a role in ensuring the sustainability of the ECD project.	22	11.5	3	1.6	7	3.6	37	19.3	123	64.1	4.2	1.314
7	The human resource involved in the implementation of this ECD project are well trained. This can be seen in how they offer the services in the project.	21	10.9	6	3.1	8	4.2	52	27.1	105	54.7	4.1	1.301
8	The human resource involved in the ECD project are readily available to offer services related to the project.	4	2.1	00	00	1	0.5	42	21.9	145	75.5	4.7	0.691
9	The continuity of this ECD project is dependent on the presence of qualified human resources to carry out project activities.	13	6.8	4	2.1	1	0.5	33	17.2	141	73.4	4.5	1.097
	Composite mean and Standard Deviation											**4.4**	**0.470**

Source: Field Data 2022

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From Table 7, the study beneficiaries agree that project resources determine the sustainability of early childhood development projects. This is indicated by a composite mean of 4.4 and a standard deviation of 0.470. In terms of specific items, the respondents were of the opinion that project funds are important in project sustainability considering statement 1 has a mean of 4.4 and a standard deviation of 0.981. The findings are in agreement with (Meyer & Marais, 2018), who stated that, for proper sustainability of projects to occur, members of the community must ensure projects funds are readily available to run project activities.

In statement number 2, the respondents were of the opinion that project finances are readily available for implementing project activities as much as this indicator had a mean of 4.7 and a standard deviation of 0.773. In statement number 3, the participants agreed that project physical resources are essential for project sustainability as a mean of 4.3 and a standard deviation of 1.045 This outcome is backed by (Neuman, McConnell, & Kholowa, 2019), who noted that the success of ECD project and their sustainability if pegged on the presence of good infrastructure. As per the results in statement number 4, the participants were of the opinion that the ECD project had enough physical resources to support the sustainability of the project. This is shown by a mean of 4.2 and a standard deviation of 1.042.

As shown in statement 5, the respondents were of the opinion that the project had enough equipment to support the sustainability of the ECD project with a mean of 4.4 and a standard deviation of 1.150 This is encouraging considering the findings by (Neuman, McConnell, & Kholowa, 2019), who states that project equipment which enhance the developmental milestones of children are essential for the sustainability of ECD projects. Respondents agreed that good physical resources like day-cares and health facilities play a key role in the sustainability of ECD projects by disagreeing with statement 6 in table 4.4. This is consistent with (Kilonzo & George, 2017), who point out the need to have enough physical structure in a project so as to encourage sustainability. As per the results in statement number 7, mean of 4.1 and a standard deviation of 1.301, the respondents showed high confidence in the training received by the human resources involved in the project. This was also backed up by the score in statement 8 that had a mean of 4.7 and a standard deviation of 0.691. The respondents also agreed that qualified human resources are key to the sustainability of ECD projects as per results in statement 9 that had a mean of 4.5 and a standard deviation of 1.097. This result is consistent with (Meyer & Marais, 2018), who found out that the importance of human resources in project sustainability could not be underestimated.

From the overall findings, it can be deduced that project resources are key to the sustainability of ECD projects. This is not limited to any particular resource since all resources are vital to the progress of the project. The findings are supported by (Dobrovolskienė & Tamošiūnienė, 2018), who in a study that looked at projects that had been reported to be sustainable concluded that there was indeed a strong link between availability of project resources and sustainability of the projects.

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Triangulation of Quantitative and Qualitative Data Analysis on Project Resources and Sustainability of ECD Projects

The in-depth interviews with the key informants were of the opinion that:
Lead Mother "… we need every kind of resources we can get to try and make the project sustainable. The funds can help us carry out the activities more frequently."

Government officials "… resources are important because, without them, there is very little that you can do in the community. But finances are the most important in helping sustain the project."

MoH staff "… at the facility, we need to have equipment like the stethoscope, weighing scales, and new born delivery kits when the caregivers come to the hospital. Without these resources, it is hard to offer the services that the mothers are seeking."

Implementing partner staff "… as a partner organization, we have tried to provide as much support as possible. In terms of facilitating meetings, transport and sometimes even buying equipment needed in the project. We realize that it is important to have resources so that the project can run smoothly."

The triangulation of the data provided from the questionnaires and the in-depth interviews which were done with the key informants confirms that project resources are essential in project sustainability. This is in tandem with (Malete, 2013), who states that ensuring continuous supply of resources in the project goes a long way in ensuring that the project will outgrow the donors and sustain itself.

Correlation of Project Resources and Sustainability of ECD Projects
The study sought to investigate the relationship between project resources and the sustainability of Early Childhood Development projects using Pearson Correlation Method. The results are shown in Table 8.

Table 8: Correlation of Project Resources and Sustainability of ECD Projects

		Sustainability of ECD Project	Project Resources
Sustainability of ECD projects	Pearson Correlation	1	.433**
	Sig. (2-tailed)		.000
	N	192	192
Project Resources	Pearson Correlation	.433**	1
	Sig. (2-tailed)	.000	
	N	192	192

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

Source: Field Data 2022

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As indicated in Table 8, there is a moderate relationship between project resources and sustainability of early childhood projects with a magnitude of (r=0.433, P<0.000). Based on the indicators of financial resources, material resources, and human resources, the study showed that there is a relationship between project resources and sustainability of early childhood development projects. This is indicated by (r=0.433, P<0.000). The study participants agreed that financial resources are needed for the sustainability of ECD projects with a mean of 4.3 and material resources with a mean of 4.5 while they also agreed that human resources are needed for the sustainability of projects with a mean of 4.3. The triangulation of quantitative and qualitative data on project resources and sustainability of projects showed that all participants agreed that project resources are needed for the sustainability of projects.

The findings of this study concur with (Ozawa, 2020), who noted that project stakeholders should be in a position to ensure continuous availability of resources to execute project activities as this enables projects to continue running, this can be enhanced by putting in place resource mobilization strategies and committees. (Patrick & Kingsley, 2017), also note that the availability of resources create security that enable staff in the project to focus on service delivery and not worry about equipment of burnout.

Conclusion and Recommendations

Conclusion

Based on the findings, the study concluded that project resources affect sustainability of ECD projects in Dagoretti North Constituency, Nairobi County, Kenya. This is in relation to the beneficiaries and the key informants agreeing that without resources, very little could be done in terms of project sustainability. The human resource needed to implement and sustain the project need to have skills and well trained for them to have an impact on project sustainability. Financial resources are also key to project sustainability and the same applies to physical resources. The key take away is for project stakeholders to put in place measure to ensure continuous resource mobilization happens so as to make the project sustainable.

Recommendations

All project resources (financial, physical, and human), are of equal importance and should be given priority without neglecting the other. Project stakeholders should endeavour to put in place mechanisms that will see into it that all resources needed to sustain the project are not only put in place but are also acted upon. This study focused on Early Childhood Development, it is recommended that another study can be carried out to look at how other resources affect sustainability of projects that target other age groups, like youth projects.

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