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Participatory Action Research on Performance of HIV/AIDS Community Health Projects

Ojall Grace Odawa [1], Charles Mallans Rambo[2], Lillian Otieno Omutoko[3], Salome Wambui Richu [4],

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Abstract

Despite significant investments in HIV/AIDS community health interventions across sub-Saharan Africa, many projects continue to struggle with sustainability, effectiveness, and community ownership. In Kenya's Kisumu County where HIV prevalence remains well above the national average the performance of such projects demands urgent attention. This study examined the influence of Participatory Action Research (PAR) on the performance of HIV/AIDS community health projects in Kisumu County, Kenya. Focusing on projects implemented by non-governmental organizations (NGOs), it investigated how PAR, along with participatory decision-making and participatory negotiations, impacted project outcomes. The research utilized a pragmatic paradigm, integrating both qualitative and quantitative methodologies, with descriptive survey and correlational designs. The study targeted 30,118 individuals, including project managers, monitoring and evaluation officers, and beneficiaries, with a final sample size of 379. Data analysis involved thematic exploration of interviews and documents, combined with statistical models such as linear regression and Pearson's correlation. The results indicated a significant relationship between PAR and project performance, with a p-value of $< .001$, leading to the rejection of the null hypothesis. The findings suggested that PAR played a critical role in enhancing the effectiveness of HIV/AIDS community health projects, providing actionable insights for project managers and stakeholders. The study also recommended further research in different counties to explore additional factors influencing project performance through participatory approaches.

Keywords: Community Health Projects, Participatory Action Research, Performance

I. Introduction

Participatory Action Research (PAR) methods aim to amplify the voices of project beneficiaries who are often marginalized in conventional research, policymaking, and development programming. As a collaborative methodology, PAR challenges traditional top-down approaches by promoting inclusive participation, self-

[1] PhD Candidate, Department of Management Science & Project Planning, Faculty of Business and Management Sciences, University of Nairobi, Kenya
graceojal@gmail.com (Corresponding Author)
https://orcid.org/0009-0009-8278-3750
[2] Professor, Department of Finance and Accounting, Faculty of Business and Management Sciences, University of Nairobi, Kenya
crambo@uonbi.ac.ke
https://orcid.org/0009-0005-9045-4261
[3] Professor, Department of Educational Management Policy & Curriculum Studies, Faculty of Education, University of Nairobi, Kenya
joyce.lillian@uonbi.ac.ke
https://orcid.org/0000-0003-0823-084X
[4] PhD, Department of Management Science & Project Planning, Faculty of Business and Management Sciences, University of Nairobi, Kenya
salomerichu@uonbi.ac.ke
https://orcid.org/0009-0009-4479-7529

determination, and locally driven development outcomes (Chevalier & Buckles, 2019). It operates across both qualitative and quantitative spectra, enabling a flexible, context-sensitive research design that simultaneously fosters capacity building within host communities (Walker, 2019).

Recent studies have underscored the effectiveness of community-led interventions in enhancing HIV/AIDS prevention and treatment outcomes. For instance, a scoping review by Moyo et al. (2025) highlighted that community-led approaches, including peer education and adherence support groups, significantly improved HIV awareness, reduced risky behaviors, and increased adherence to antiretroviral therapy in Southern Africa. Similarly, Akatukwasa et al. (2025) emphasized the pivotal role of community health volunteers in optimizing HIV prevention services in Kenya and Uganda. However, the specific application of PAR in HIV/AIDS community health initiatives, particularly in sub-Saharan African contexts with high disease burdens, remains underexplored. The role of participatory frameworks especially the intersection of participatory decision-making, stakeholder negotiations, and regulatory environments on project performance has not been adequately investigated.

This study addresses this gap by building a conceptual framework grounded in Stakeholder Theory and Program Theory. Stakeholder Theory (Freeman, 1984; Barney & Harrison, 2020) supports the integration of community voices, recognizing that project success depends on the inclusive engagement of diverse actors. Program Theory (Weiss, 1997) further guides the evaluation of intervention processes, mapping how participatory strategies influence intended outcomes. Together, these theories provide a foundation for assessing how participatory action and regulatory factors shape the performance of HIV/AIDS community health projects.

Kisumu County, Kenya, presents a critical case for this inquiry due to its persistently high HIV prevalence (National AIDS Control Council, 2021) and the concentration of NGO-led health interventions. Despite various stakeholder collaborations and resource investments, project outcomes remain inconsistent, suggesting a need to reevaluate current implementation frameworks. This study thus investigates how PAR influences the performance of HIV/AIDS projects in Kisumu, particularly focusing on participatory monitoring and evaluation (M&E), decision-making, and negotiation processes.

II. Literature Review

Participatory Action Research (PAR) emphasizes collaboration among stakeholders such as project implementers, beneficiaries, and donors in identifying project priorities, monitoring, and evaluating key elements. This engagement allows communities to actively contribute to interventions such as HIV counselling, screening, and resource allocation, thereby enhancing the overall performance of these projects. The participatory decision-making (PDM) and negotiation involved in such processes foster a sense of ownership among stakeholders, leading to more sustainable project outcomes (CARE International, 2018; Davies, 2018).

This disparity is notably evident in HIV/AIDS community health interventions executed by NGOs in Kisumu County. Although participatory processes are essential, it remains unclear how these are influenced by the national and local regulatory environment especially considering the complex multi-stakeholder dynamics within such projects (UNAIDS, 2020).

Kisumu County's HIV prevalence stands at 17.5%, while neighbouring Homa Bay County registers a staggering 26.0% both significantly higher than the national average of 4.9% (NACC, 2020. Furthermore, new HIV infection rates in Kisumu County remain high, with 4,661 new cases reported in 2021, predominantly affecting individuals aged 15 to 24, who account for 30% of these new infections (NACC, 2020). Despite various multi-sectoral interventions including support from the state, NGOs, and international partners achieving a significant reduction in HIV prevalence remains challenging (Kumah et al., 2023). The success of antiretroviral therapy (ART), for example, hinges on lifelong treatment, as there is currently no complete cure for HIV (Kemnic & Gulick, 2019). The present study, therefore, seeks to assess how PAR, as part of participatory M&E, influences project performance and to determine whether regulatory frameworks moderate this relationship.

PAR has numerous dimensions and applications and is thus devoid of a specific definition. It refers to a collection of practices derived through continuous experimentation by individuals, grounded in reasoning, fact-establishment, and learning. The models in PAR all embody the belief that research performed and the consequent action taken must be carried out by the targeted people and not on their behalf or for them (Holliday et al., 2020). PAR is derived from multiple knowledge dimensions, including personal experiences, professional expertise, and historical beliefs. In theory, most PAR work is anchored in Freire's (2020) vitese on research in adult education, which emerged from a rights-based movement. Participatory research has led to effective collaboration in HIV prevention activities that are tailored to local priorities (Sónia Dias et al., 2018).

A study by Chopel (2019) explored the ecological focus of Community-Based Participatory Research (CBPR) by examining HIV/AIDS cases diagnosed at later stages in Oakland, California. The main themes were differences in race and ethnic background as factors contributing to inequalities in health services. The methodology was qualitative, based on a literature review; possible environmental and social factors were established using an

ecological framework to place them in context, leading to late diagnoses among African Americans and Latinos. The study included 26 unique peer-reviewed publications grounded in the social ecology model. The sample characteristics were qualitative in design, and the results indicated that studies on racial differences in the uptake of HIV testing and diagnosis were mainly cross-sectional or limited to just one race or ethnicity in a specific locality.

CBPR and a conceptual framework merging the Theory of Planned Behavior (TPB) with Structural Equation Modeling (SEM) were employed to operationalize the study by Chopel (2019). Factors stratified at various levels emerged as influencing HIV testing behavior in these communities. Resources were channeled toward involving the community and building their capacities, with limited effort to locate cases of late diagnosis for direct interviews. Additionally, the sample size was small and non-random, making generalization difficult. While Chopel's study focused on race and ethnicity in CBPR, the current study will emphasize PAR indicators such as stakeholder engagement, the use of mixed methods, and the moderating effects of the regulatory framework (i.e., legal compliance) on the performance of HIV/AIDS community health projects implemented by NGOs in Kisumu County, Kenya (Chopel et al., 2019).

Similarly, Leask et al. (2019) sought to develop a collection of essential principles and recommendations for co-creating public health projects in Bangladesh. These concepts were developed through the analysis of case studies addressing distinct health behaviors across diverse populations. The core elements of co-creation were identified in four phases: planning, implementation, evaluation, and reporting. Three approaches were proposed to illustrate how co-created solutions could scale at the population level. To facilitate collaborative public health interventions, the study offered a governance framework to manage the process. Although the reviewed study employed a qualitative case-study method without theoretical anchoring, this research will examine the PAR indicator of knowledge advancement, supported by Program Theory, and evaluate the moderating role of regulatory frameworks on the effectiveness and advancement of HIV/AIDS community health programs in Kisumu County (Leask et al., 2019).

Holliday et al. (2020) explored the steps and outcomes of a PAR framework designed for needs assessment to address reporting disparities through action-oriented mitigation strategies. Using a mixed-methods design, research and prevention initiatives were implemented in priority areas identified by the Morehouse School of Medicine Prevention Research Center (MSM PRC). Participants included board members, secondary data from municipal and state authorities, and primary data gathered from and by beneficiaries. The study identified diabetes, obesity, hypertension, and STIs as the most prevalent health concerns prioritized by the community. Determinants included unstable social ties, missed opportunities for physical activity, poor nutrition, lack of disease knowledge, and challenges in accessing affordable care.

Akintobi et al. (2020) conducted a related investigation involving 361 community health nurses. Survey data were collected electronically via Facebook and other platforms, with questionnaires administered by community surveyors and PRC staff. Findings showed that adopting needs-based assessments in community-participatory research facilitated the development of health research agendas, policy frameworks, and systemic change. This led to community benefits such as job creation and grant access. While the reviewed study focused on community health nursing, the present study evaluates PAR's impact on stakeholder-driven social change and empowerment, integrating Stakeholder Theory, regulatory compliance, and Program Theory to assess project performance in HIV/AIDS health interventions in Kisumu.

In the same vein, Marinovich, Zoe, Alexis, and Hobbs (2019) conducted a PAR-based study titled "Growing Up with HIV in Kisumu, Kenya," involving adolescents living with HIV. The goal was to gather their perspectives and experiences. A variety of qualitative data collection tools were used, including group discussions, interviews, observations, meetings, and journal forums. A total of 40 adolescents were recruited from social homes. Data were coded and reflected upon by the research team. The findings indicated that despite the stigma, adolescents could express personal visions through the participatory framework.

The study called for further exploration of adolescents' experiences to identify shared themes for future programs. Similarly, Fine et al. (2021) investigated how PAR facilitated the growth and coping mechanisms of young people living with HIV. The study used qualitative methodologies, including discussion groups, observations, meetings, and journal forums. However, the present study extends these findings by examining how PAR promotes social change among stakeholders and improves project performance in HIV/AIDS initiatives in Kisumu County through a mixed-methods approach and theory of change (Fine et al., 2021).

Chadd et al. (2025) demonstrated how PAR can be operationalized in population health projects, resulting in more inclusive evaluation processes. Likewise, Tetui et al. (2024) found that PAR enhanced district-level health systems

in Uganda by strengthening local capacity and responsiveness outcomes closely aligned with this study's focus on M&E and stakeholder empowerment.

In Kenya, Naanyu et al. (2025) examined community responses to antiretroviral therapy (ART) group models in Trans-Nzoia County and found that projects utilizing participatory frameworks achieved stronger buy-in and sustained support. These findings reinforce the relevance of PAR in improving the effectiveness of HIV/AIDS programming in regions such as Kisumu, where stakeholder trust and cultural contextualization are critical.

Moreover, Orya et al. (2024) applied PAR in Nigeria to improve HPV prevention among adolescents, reporting increased engagement and awareness due to community-driven educational models. Although focused on HPV, the study offers transferable insights into how participatory methods foster health literacy, behavior change, and project continuity factors equally relevant to HIV/AIDS interventions.

III. Methodology

This study was anchored in the pragmatist paradigm, which emphasizes problem-solving through methodological pluralism. Pragmatism was selected as the most appropriate philosophical foundation for this research because it allows for the integration of both quantitative and qualitative approaches, making it suitable for investigating complex and socially embedded phenomena such as the performance of HIV/AIDS community health projects in Kisumu County, Kenya.

Collectively, the descriptive cross-sectional survey and the correlational methodology formed the basis of the study. Participants in this research were individuals who benefited from the HIV/AIDS community health initiative. The descriptive cross-sectional investigation provided useful information on the predominance of health outcomes in this group at a given point in time. In contrast, the correlational design demonstrated the nature and extent of the relationship between the relevant variables.

Beneficiaries of the HIV/AIDS community health initiative, as well as project administrators and monitoring and evaluation officers, constituted the study's target population, and the data collected from them served as the primary source of analysis. The research was conducted in Kisumu County. Over the past two years, 59 NGO-led community health initiatives have been instrumental in implementing HIV/AIDS programs in the county. These initiatives were all related to HIV/AIDS public health.

The total target population was 30,118 individuals, comprising 30,000 beneficiaries, 59 project managers, and 59 monitoring and evaluation officers. Beneficiaries aged 18 and above were selected as they were more likely to provide informed consent. Project managers and M&E officers were also included in the study due to their direct involvement in implementing and overseeing project outcomes.

To maintain objectivity and ensure an unbiased sample, the study employed a simple random sampling method. Stratification was used to ensure proportional representation from each of the 59 HIV/AIDS community health projects run by NGOs. A random selection technique was applied within each stratum to guarantee equal opportunity for inclusion, based on the formula proposed by Krejcie and Morgan (1970).

$$s = \frac{x^2 NP(1-P)}{e^2(N-1) + x^2 P(1-P)}$$

Where s = the required sample size,

= the table value of the chi-square for 1 degree of freedom at the desired confidence level (3.841),

N = The population size,

P = the population proportion (assumed to be 0.50 given that this would provide the maximum sample size),

e2 = the degree of accuracy expressed as a proportion (0.05).

For the quantitative data, 379 members of the target group were surveyed, while 59 monitoring and evaluation personnel and 59 project managers were selected at random to provide qualitative feedback.

Participants' quantitative responses were collected using a structured questionnaire, whereas qualitative views from project managers and monitoring and evaluation officers were obtained through a semi-structured interview guide. Document analysis of NGO reports and M&E records was also conducted to support the triangulation of findings. The structured questionnaire was developed by the researcher but adapted from established tools used in participatory evaluation studies (e.g., Wallerstein et al., 2023). The instrument included items measuring dimensions such as stakeholder engagement, participatory decision-making, negotiation processes, and project performance. Items were rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree."

To ensure content validity, the questionnaire was reviewed by three subject-matter experts in public health and community-based research. A pilot test was conducted with 37 participants (10% of the sample), drawn from NGOs operating in neighboring counties. Feedback from the pre-test was used to refine the wording and

sequencing of the items. Internal consistency of the questionnaire was assessed using Cronbach's alpha, with each subscale exceeding the 0.70 reliability threshold, indicating acceptable internal reliability. Exploratory factor analysis was also performed to evaluate construct validity.

Common method bias was addressed through both procedural and statistical strategies. Respondents were assured of anonymity and the non-evaluative nature of the survey to reduce social desirability bias. Harman's single-factor test revealed no evidence of a dominant factor, indicating minimal common method bias. Additionally, no substantial variations were identified when comparing early and late responses across key variables, further minimizing the potential for non-response bias. Representativeness was enhanced through the application of stratified random sampling, ensuring coverage across all participating NGOs in Kisumu County.

Based on standard assumptions inherent in regression analysis, the study ensured that the data collected were suitable for statistical examination. If certain conditions were not met, the analysis results could be misleading. The assumptions examined included normality, linearity, multicollinearity, and independence of errors. Quantitative data were analyzed using SPSS Version 25. Descriptive statistics such as means, frequencies, and standard deviations were used to summarize the data. Inferential analyses included Pearson's correlation and multiple regression to test relationships between independent variables and project performance. Data were screened to confirm compliance with key statistical assumptions, including normality, linearity, multicollinearity, and error independence. Qualitative data from interviews were transcribed, coded, and analyzed thematically to capture nuanced stakeholder perspectives on the influence of participatory approaches.

IV. Results and Discussions

Participants were asked to indicate their age to assess whether the distribution reflected a representative spread across different age groups. This demographic data helped ensure that the study results captured the perspectives of various age cohorts. The findings were categorized by age and presented in terms of frequency and percentage, as shown in Table 1.

According to Table 1, a small proportion of respondents (17.4%) were aged 38 and above, while the vast majority (82.6%) fell within the 18–37 age bracket. The majority of participants, therefore, belonged to the sexually active age group, which is commonly associated with a higher risk of contracting HIV/AIDS due to engagement in socially risky behaviors.

This age distribution confirms that the participants were legally eligible to participate in the study and were well-positioned to offer insights into the effectiveness of participatory monitoring and evaluation frameworks and the regulatory environment on HIV/AIDS community health project performance in Kisumu County, Kenya.

Table 1. Distribution of Respondents by Age Group

Age group	Frequency	Percent	Cumulative Percent
18 -27 years	143	41.3	41.3
28-37 years	143	41.3	82.6
38-47 years	44	12.7	95.3
48-57 years	13	3.8	99.1
58 years and above	3	0.9	100
Total	**346**	**100**	

Note: Author's own work)

To assess gender representation in HIV/AIDS community health programs, it was important to analyze the distribution of respondents by gender. This demographic detail was essential for informing policy decisions and supporting strategic planning by organizational management. The findings are presented in Table 2, which shows the gender distribution of the respondents based on the gender indicators collected during the survey.

Table 2. Distribution of Respondents by Gender

Gender	Frequency	Percent
Females	217	62.7
Males	129	37.3
Total	**346**	**100**

Note: Author's own work

According to Table 2, more than 60% of the participants were female, while only 37.3% were male. Gender disparity appears to persist in HIV/AIDS community health initiatives, as the results indicate that a higher proportion of female respondents utilized the services offered by these programs compared to their male counterparts. This finding suggests that women are more likely than men to prioritize and dedicate time to learning about their HIV status. Consequently, there is a need to encourage greater male engagement with HIV/AIDS community health services.

The participants were asked to indicate their highest level of education. There was a strong correlation between the respondents' educational attainment and their understanding of the regulatory framework affecting the outcomes of HIV/AIDS community health initiatives implemented by NGOs in Kisumu County, Kenya, as well as their engagement in participatory evaluation and monitoring processes. Table 3 presents the distribution of respondents according to their level of education.

Table 3.Distribution of Respondents by level of Education

Level of Education	Frequency	Percent
None	31	9
Secondary	36	10.4
College	59	17.1
University	220	63.6
Total	**346**	**100**

Note: Author's own work

The survey results revealed that the majority of respondents (80.7%) had attained a college degree or higher, while a minority (19.3%) had completed secondary school or below. These findings suggest that most individuals in Kisumu County, Kenya, who participated in NGO-led HIV/AIDS community health projects possessed sufficient educational background to provide informed responses regarding how the regulatory framework and participatory evaluation and monitoring processes influenced the success of these programs.

Participants in the study were asked about the duration of their involvement in HIV/AIDS programs within their communities. Researchers in Kisumu County, Kenya, assessed the length of respondents' engagement to determine whether they possessed the necessary experience to contribute meaningfully to participatory evaluation and monitoring activities. Additionally, the analysis considered how familiarity with the regulatory frameworks guiding NGO-led HIV/AIDS community health projects might be influenced by this experience. Table 4 presents the distribution of respondents based on their length of service within the organizations, displayed in terms of frequency and percentage.

Table 4. Distribution of Respondents by number of years in the HIV/AIDs Community Health Projects

Work Experience in the Specialty	Frequency	Percent	Cumulative Percent
1 - 5 years	104	30.1	30.1
6-10 years	176	50.9	81.0
11-15years	54	15.6	96.6
16-20years	9	2.6	99.2
21-25 years	1	0.3	99.5
26-30 years	2	0.5	100.0
Total	**346**	**100**	

Note: Author's own work

Table 4 shows that over 81% of respondents had been actively involved in HIV/AIDS community health programs in Kisumu County for a period of one to ten years. A smaller proportion (19%) had been working in the field for 11 years or more. These results suggest that the majority of study participants in Kisumu County had acquired sufficient experience to provide informed insights into the impact of participatory monitoring and evaluation processes and the regulatory framework on the success of HIV/AIDS community health projects implemented by NGOs.

In this study, participatory action research refers to an approach in which the community is actively involved and stakeholders are engaged in the research process. Key dimensions include the advancement of knowledge through research, the number of participants involved in action, the extent of social change achieved, and the level of empowerment realized through that social change.

A key aspect of the third objective was to collect participants' views on ten statements related to participatory action research. A Likert scale was used, where 5 represented "Strongly Agree," 4 "Agree," 3 "Neutral," 2 "Disagree," and 1 "Strongly Disagree." The data were analyzed by calculating the frequency and percentage for each statement. Additionally, the mean scores and standard deviations were reported and are presented in Table 4.5.

Table4.5. Participatory Action Research on Performance of HIV/AIDS Community Health Projects.

		SA	A	N	D	SD	Mean	Std. dev
1.	Stakeholders participating in a research process identifies areas of improvement in participatory action research	147(42.5%)	183(52.8%)	9(2.6%)	4(1.2%)	3(0.9%)	4.35	0.674
2.	Review of current practices by participants enhances participatory action research	128(37%)	201(58.1%)	9(2.6%)	1(0.3%)	7(2.0%)	4.28	0.717
3.	It is essential for projects to include participatory action research in order to develop knowledge in the research process.	146(42.1%)	173(50%)	21(6.1%)	2(0.6%)	4(1.2%)	4.32	0.716
4.	Advancement of knowledge in research process improve participatory action research plans	142(41%)	152(44%)	28(8.1%)	10(2.9%)	14(4.0%)	4.15	0.975
5.	Participatory action research is impacted by the quantity of individuals that are actively involved in the study process.	152(44%)	149(43%)	30(8.7%)	13(3.7%)	2(0.6%)	4.26	0.814
6.	The number of participants taking action in participatory action research is communicated to stakeholders	117(33.8%)	159(46%)	44(12.7%)	14(4%)	12(3.5%)	4.03	0.970
7.	Level of social change on part of stakeholders influences participatory action research	123(35.6%)	174(50.3%)	26(7.5%)	7(2.0%)	16(4.6%)	4.10	0.959
8.	The participatory action research	111(32.1%)	182(52.6%)	23(6.6%)	20(5.8%)	10(2.9%)	4.05	0.937

	improves social change of communities							
9.	The achievement and empowerment through social change influenced participatory action research	117(33.8%)	180(52%)	34(9.9%)	10(2.9%)	5(1.4%)	4.14	0.815
10.	Participatory action research groups reviews achievement and empowerment through social change	85(24.6%)	189(54.6%)	25(7.2%)	9(2.6%)	38(11%)	3.79	1.17
Composite mean & Composite standard deviation							**4.08**	**0.941**

Note: Author's own work

In Table 4.21, the composite mean for Participatory Action Research (PAR) was 4.08, with a composite standard deviation of 0.941. According to the Likert scale responses, the majority of participants believed that PAR positively affects the effectiveness of HIV/AIDS initiatives managed by NGOs (mean = 4.08; SD = 0.941). A set of ten statements was developed to assess the impact of PAR on project performance.

Statement 1: "Participants in a research process identify areas for improvement in participatory action research" had a mean score of 4.35 and a standard deviation of 0.674. Among 346 participants, 147 (42.5%) strongly agreed, 183 (52.8%) agreed, 9 (2.6%) were neutral, 4 (1.2%) disagreed, and 3 (0.9%) strongly disagreed. This mean score exceeded the overall composite mean, suggesting that stakeholder involvement in the research process effectively highlights opportunities for improvement. The lower standard deviation indicates a high level of consensus. These findings support Argyris and Schön (2019), who emphasized that PAR ensures community members are involved in defining research topics, methods, and outcomes, thereby enhancing alignment with community needs and improving health outcomes.

Statement 2: "Participants' evaluation of existing practices improves participatory action research" recorded a mean of 4.28 and a standard deviation of 0.717. Among the 346 respondents, 128 (37%) strongly agreed, 201 (58.1%) agreed, 9 (2.6%) were neutral, 1 (0.3%) disagreed, and 7 (2.0%) strongly disagreed. This result suggests that participatory evaluation enhances project performance, with a relatively unified opinion among respondents.

Statement 3: "Advancement of knowledge through the research process is key in projects" yielded a mean of 4.32 and a standard deviation of 0.716. Responses included 146 (42.1%) strongly agreeing, 173 (50%) agreeing, 21 (6.1%) neutral, 2 (0.6%) disagreeing, and 4 (1.2%) strongly disagreeing. The finding supports Akintobi et al. (2020) and Baum, MacDougall, and Smith (2020), emphasizing that community participation in needs-based research enhances engagement and builds local capacity.

Statement 4: "Advancement of knowledge improves PAR plans" had a mean of 4.15 and a standard deviation of 0.975. Despite a higher-than-composite mean, the relatively high deviation indicates more varied opinions. This aligns with Baum et al. (2020), who found that PAR fosters skill development and long-term community resilience.

Statement 5: "The number of participants taking action influences PAR" scored a mean of 4.26 with a standard deviation of 0.814. This result suggests a strong consensus that broader participation enhances project performance, confirming findings by Marinovich et al. (2019) and Holliday, Phillips, and Akintobi (2020).

Statement 6: "The number of participants taking action is communicated to stakeholders" had a mean of 4.03 and a standard deviation of 0.970. Although the mean was slightly below the composite average, the finding underscores the importance of communication in participatory initiatives.

Statement 7: "The level of social change among stakeholders influences PAR" yielded a mean of 4.10 and a standard deviation of 0.959. This supports the notion that stakeholder-driven change enhances the impact of participatory processes on project outcomes.

Statement 8: "PAR improves social change in communities" had a mean of 4.05 and a standard deviation of 0.937. This supports findings by Dias et al. (2018), who noted that PAR has transformative effects on community organizations and fosters regionally tailored coalitions for HIV prevention.

Statement 9: "Achievement and empowerment through social change influence PAR" had a mean of 4.14 and a standard deviation of 0.815. This indicates that empowerment is integral to improving HIV project outcomes.

Statement 10: "PAR groups review achievement and empowerment through social change" received a mean of 3.79 and a standard deviation of 1.17. The relatively lower mean and higher deviation suggest more mixed views, yet the implication remains that structured reflection can influence project performance. These results align with Baum et al. (2020), who found that participatory methods promote sustainable youth health initiatives.

In interview sessions, project managers and M&E officers emphasized that involving primary beneficiaries enhances project performance. They noted that participatory action research brings together diverse expertise and facilitates shared decision-making on resource allocation, problem definition, and data analysis. Participants willingly overcame personal reservations to engage in evaluation and embraced the value of evidence-based practic.

The study aimed to investigate the relationship between Participatory Action Research (PAR) and the performance of HIV/AIDS community health projects. To assess this relationship, a Pearson correlation coefficient analysis was conducted on the scale scores at a 5% significance level. The total scores were computed by summing individual responses to each item. The size and direction of the correlations were interpreted in accordance with Cohen's (1988) guidelines. The results of the correlation analysis are presented in Table 4.6.

Table 4.6. Correlation between Participatory Action Research and the Performance of HIV/AIDS Community Health Projects

Participatory Action Research		**Performance of HIV/AIDs community health projects**
Overall correlation	Pearson correlation	0 .362*
	Sig.(2-tailed)	0.000
	N	346

**Correlation is significant at 0.05 level (2-tailed)*

Note: Author's own work

To test the extent of the relationship between Participatory Action Research (PAR) and the performance of HIV/AIDS community health projects, several characteristics of PAR were analyzed based on the following hypothesis:H_0: There is no significant relationship between Participatory Action Research and the performance of HIV/AIDS community health projects.The corresponding mathematical model for the hypothesis was identified as follows:Performance of HIV/AIDS community health projects = f (Participatory Action Research)The study found a low positive overall correlation ($r = 0.362$), which was statistically significant ($p = 0.000 < 0.05$) between Participatory Action Research and the performance of HIV/AIDS community health projects. This implies that there is a significant relationship between PAR and project performance, leading to the rejection of the null hypothesis (H_0) and the acceptance of the alternative hypothesis. Therefore, the study concludes that Participatory Action Research significantly influences the performance of HIV/AIDS community health projects.

Simple linear regression was adopted to investigate the effect of Participatory Action Research (PAR) on the performance of HIV/AIDS community health projects. It was necessary to obtain the views of the participants regarding the effect of PAR on the performance of these projects. The rationale for using the simple regression model was to determine whether PAR, as a predictor, significantly or insignificantly influenced the performance of HIV/AIDS community health projects. These aspects are further discussed under the following sub-thematic areas.

The model summary aimed to determine whether PAR, as a predictor, significantly or insignificantly influenced the performance of HIV/AIDS community health projects. The results of the regression model summary are presented in Table 4.7.

Table 4.7. Model Summary for the Effect of Participatory Action Research on the Performance of HIV/AIDS Community Health Projects

Model Summary

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0.362[a]	0.131	0.129	0.309

a. Predictors: (Constant), Participatory action research

Note: Author's own work

The model summary in Table 4.7 suggests that there is a low positive correlation (R=0.362) between participatory action research on Performance of HIV/AIDs community health projects and those predicted by the regression model. In addition, 13.1% of the variation in the performance of HIV/AIDs community health projects is explained by participatory action research.

The study sought to determine whether the regression model provides a good fit for predicting the performance of HIV/AIDS community health projects based on the implementation of Participatory Action Research (PAR). The ANOVA results are presented in Table 4.8.

Table 4.8. ANOVA Results for the Regression Model of Participatory Action Research and Project Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.969	1	4.969	51.986	**0.000**[b]
	Residual	32.878	344	0.096		
	Total	37.847	345			

b. Predictors: (Constant), Participatory action research
a. Dependent Variable: Performance of HIV/AIDs community health projects

Note: Author's own work

The ANOVA results from Table 4.8 indicated that (F-statistics (1,344) =51.986 is significant since the P -value 0.000< 0.05 implying that the predictor co-efficient is at least not equal to zero. and hence the regression model results in significantly better prediction of performance of HIV/AIDs community health projects.
The study sought to determine whether Participatory Action Research (PAR) had a significant effect on the performance of HIV/AIDS community health projects. The results of the regression coefficients are presented in Table 4.9.

Table 4.9.Regression Coefficients for Participatory Action Research Predicting the Performance of HIV/AIDS Community Health Projects

Coefficients Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.879	0.186		15.504	0.000
	Participatory action research	0.322	0.045	0.362	7.210	0.000

b. Predictors: (Constant), Participatory action research

Note: Author's own work

The study sought to determine whether Participatory Action Research (PAR) had an effect on the performance of HIV/AIDS community health projects. The simple linear regression coefficients indicated that there was a significant effect of PAR on project performance. The coefficient of the constant term ($\beta_0 = 2.879$; p-value = 0.000 < 0.05) and the coefficient for Participatory Action Research ($\beta_3 = 0.322$; p-value = 0.000 < 0.05) were both statistically significant.
The regression model for PAR was: $y = 2.879 + 0.322X_3$, implying that for each unit increase in Participatory Action Research, the performance of HIV/AIDS community health projects increased by 0.322 units, holding other factors constant.
It was therefore concluded that Participatory Action Research and project performance are linearly related. This finding aligns with the results of Baum, MacDougall, and Smith (2020), who studied the role of PAR in sustaining youth health projects in various communities in California, USA, and found that PAR enhances the sustainability of such projects.

V. Conclusions and Recommendations

This study set out to examine how Participatory Action Research (PAR) influences the performance of HIV/AIDS community health projects implemented by NGOs in Kisumu County, Kenya. Guided by Stakeholder Theory and Program Theory, the study employed a mixed-methods approach to evaluate the role of participatory decision-making, negotiation, and knowledge advancement on project performance. Based on linear regression analysis

and Pearson correlation, the results demonstrated a statistically significant and positive relationship between PAR and project performance ($p < 0.001$), affirming that participatory practices meaningfully enhance the effectiveness and sustainability of community-based health interventions.

The findings confirm that when beneficiaries and local stakeholders are involved in project design, decision-making, and evaluation, the resulting sense of ownership contributes to improved accountability, adaptability, and alignment of project objectives with community needs. The study also found that regulatory frameworks played a moderating role, reinforcing the necessity of a well-defined compliance structure to support participatory efforts.

For NGOs and project managers, these findings suggest that PAR is not merely a participatory ideal but a practical strategy for improving implementation outcomes. By integrating participatory monitoring and evaluation (PM&E) systems into routine project activities, organizations can improve transparency, responsiveness, and long-term project viability. Training M&E officers in community-driven data collection and reflection practices will further strengthen project performance.

From a policy perspective, the study highlights the need for governments and regulatory bodies to embed participatory requirements into funding guidelines and reporting frameworks for HIV/AIDS programs. Supporting NGOs to comply with participatory governance standards such as stakeholder consultations and beneficiary feedback mechanisms will enhance both effectiveness and public trust. The evidence from Kisumu contributes to broader policy conversations on decentralization, health equity, and citizen engagement in Kenya's Universal Health Coverage (UHC) agenda.

This study contributes to the growing body of knowledge on the intersection of participatory methodologies and development outcomes. It operationalizes PAR within a health project context using empirical evidence from a high-burden region, thereby offering a testable framework for further research. Future studies may expand on this by comparing the effectiveness of PAR across different regions or health sectors, or by testing variations in participatory intensity and their effects on performance metrics.

Socially, the results underscore the value of empowering communities in shaping health interventions that directly affect their lives. Increased participation in project cycles fosters social inclusion, improves health literacy, and strengthens community capacity for self-advocacy. These outcomes are instrumental in shifting public attitudes toward health services and reducing stigma particularly in sensitive domains such as HIV/AIDS care and prevention.

Future studies could explore the longitudinal impacts of PAR on health project sustainability, including post-funding performance. Researchers should also investigate the interplay between digital tools and participatory methods in enhancing project monitoring, particularly in under-resourced areas. Finally, a comparative policy analysis could further illuminate how different regulatory environments influence the success of participatory frameworks in community health programming.

Competing Interest Statement

This research was conducted in the absence of any commercial or financial relationships among the authors, and they declare no potential conflict of interest.

Author Contribution Statement

All authors contributed to the revision of the manuscript, read, and approved the submitted version. Ojall G. Odawa was responsible for the conceptualization of the study, data management and analysis, funding acquisition, development of the research methodology, drafting of the manuscript, and subsequent editing.

Rambo C. M. provided supervision, reviewed the manuscript draft, contributed to the conception and design of the study, and participated in the manuscript revision. He also read and approved the final submitted version.

Otieno-Omutoko L. contributed through supervision, manuscript review, and revision, and approved the final version of the manuscript.

Richu S. W. provided supervision, reviewed the draft, organized the database, performed the statistical analysis, and interpreted the results.

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