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ABSTRACT

Maternal and child health (MCH) outcomes in Nairobi City County persist with extremely structural and programmatic challenges especially in the urban informal settlements where there are significant health inequities. This study focuses on the impact of participatory monitoring and evaluation (PM&E) processes (participatory planning, data collection and data analysis, and utilization of findings) on the performance of MCH programs. The research addresses a critical lack of empirical evidence on how multi-stage participation of stakeholders bolsters accountability, contextual appropriateness and sustainability in urban health interventions. An explanatory sequential mixed-methods approach was used in which a census approach was undertaken of 114 respondents from 36 MCH programs, comprising of program managers, frontline health workers, and community-based actors. Quantitative data were gathered by structure Likert-scale questionnaires with complementary semi-structured interviews in order to produce qualitative data. Data analysis included descriptive statistics, Pearson correlation, and simple and multiple linear regression analysis, where the test hypotheses were below a =0.05 level of significance. Qualitative data was thematically analyzed to add meaning to the quantitative data. The results show that there is a statistically significant and positive influence of all four PM&E components on the performance of MCH programs. Participatory planning ($r = 0.775$), data collection ($r = 0.772$), data analysis ($r = 0.792$) and utilization of findings ($r = 0.810$) had a good association with key performance indicators, such as coverage of antenatal care, skilled birth attendance, immunization uptake and outcomes of maternal and child mortality ($p < 0.05$). Collectively, PM&E processes accounted for 61.6% of the variance of MCH program performance ($R2 = 0.674$). The study concludes by stating that integrated participatory monitoring and evaluation helps substantially to improve the effectiveness of maternal and child health programs. The findings provide solid evidence for informing policies and practices such as strengthening stakeholder ownership, enhancing evidence-based decision-making and support the development of sustainable and context-related MCH programming in complex urban settings.

Keywords: Participatory M&E Process and Performance, Maternal and child Mortality, Child Health Programs, Nairobi City County

INTRODUCTION

Participatory monitoring and evaluation is a vital strategy to the increase of answerability and improving the outcome of advance programming (Chen el at., 2024), especially in the health sector where community participation is a key resource in accomplishment of sustainable outcomes (Karuga, 2024; Sonnenfeld et al., 2024). Maternal and child health outcomes remain critically high despite the numerous interventions in Kenya (Chepkorir, 2024; Maina, 2024), PM&E should come up with a strategic shift as solution through implementation gap and strengthening health systems. Conceptual interaction of participatory monitoring and assessment planning, data assortment and analysis, implementation of results then performance of MCH programs can be viewed as a complicated causal pathway that is insufficiently developed in available literature (Chen el at., 2024; Kogen, 2024).

Participatory planning builds the precondition of engagement and sets the stage of the stakeholder roles and evaluation frameworks, whereas participatory data collection guarantees the attainment of relevant and accurate data gathering about the diverse perspectives (Karuga, 2024). Participatory data analysis converts the raw data into communally accepted knowledge and information (Kogen, 2024) leading to the utilization phase, during in which the findings are utilized in the programmatic decisions and adaptations (Patton, 2024; Wanimbo et al., 2025). Theoretically, this sequential but repetitive process improves the performance of programs by enhancing ownership, contextuality, and responsiveness (Wanimbo et al., 2025; Patton, 2024). The whole process of evaluation is anchored on participatory M&E planning (Chen el at., 2024). It is sought by considering the stakeholder roles, indicators, and methodologies, which are identified through collaborative actions (Karuga, 2024). When the participants such as local residents, health workers, and beneficiaries collectively set the success indicators besides assessment frameworks, resultant project review and assessment system tends to show local priorities and knowledge systems, as opposed to externally imposed metrics (Valderas et al., 2025; Dushkova & Ivlieva, 2024). There is evidence that the inclusive processes of planning can greatly promote the buy in of the stakeholders, and set up effective systems of accountability (Sonnenfeld et al., 2024), both of which contribute to the increased fidelity of implementation and performance of resource allocation in health programs (Ministry of Health, 2023). Such a collaborative planning methodology is necessary to make sure that the multidimensional aspects of program outcomes

are reflected in the evaluation frameworks, rather than just being limited to the traditional clinical indicators (Gebremeskel, 2024; Wakiaga & Nalugala, 2024).

The proposed framework is operationalized by participatory data collection, which involves stakeholders in the collection process by employing information-gathering approaches that do not violate local contexts and knowledge systems (Karuga, 2024). The information obtained when the program stakeholder such as community health workers and the beneficiaries are actively involved in the data collection process using cultural relevant mechanisms exhibits a higher level of validity and completeness than externally-driven data collection processes (Ombisa et al., 2025). Recent literature suggests that participatory data collection in health settings enhances the quality of data, as well as develops the local capacity of critical thinking and identifying problems, forming a virtuous cycle of learning and improvement (Nutley & Reynolds, 2013; Longworth et al., 2024). This participative method of evidence production makes sure that data is representative of ground realities and also commits to communities by empowering them through the research itself.

Use of the monitoring and evaluation findings as a key element of chain necessitates to ensuring proof of evaluation is aligned to the program changes via the role played by community participants in the planning mechanism (Patton, 2024; Kogen, 2024). The final trial of any monitoring and evaluation structure is whether the aforementioned results are actually put to use in order to improve programming (Wanimbo et al., 2025). Participatory methods are noted to be much more likely to catalyze an increase the utilization rates by establishing a shared ownership of recommendations (Patton, 2024; Longworth et al., 2024). The level of contextual relevance and implementation viability of the resultant program adaptations is higher when program actors such as frontline health workers and community members are engaged in planning actions, which are founded on the evaluation outcomes (Weru, 2024; Ombere, 2025; Wakiaga & Nalugala, 2024). The given communal usage makes M&E no longer a compliance but a valid learning process that constantly enhances the outcomes of the programs (Chen el at., 2024).

The result of monitoring and evaluation participatory processes should improve display regarding maternal and child health programs, which has service delivery, as well as health outcome components (). The indicators used in this study in gauging the performance of MCH in the Nairobi

County includes coverage of antenatal care, skilled birth attendance, immunization levels, and maternal and child mortality. The theoretical premise of this research is this participating monitoring and assessment methods increase presentation regarding MCH projects via various channels including ensuring relevance of the program to local needs, enhancing the quality of implementation by creating feedback mechanisms, maximizing accountability structures, and establishing community ownership of health programs (Septiono et al., 2025; Sonnenfeld et al., 2024). These relationships are of critical information to engendering the enhancement of MCH programming in a complicated urban area such as Nairobi City County (Gebremeskel, 2024; Wakiaga & Nalugala, 2024).

Research Problem

The presentation of the motherly and child well-being projects in Nairobi City County is below optimal regardless of diverse interventions (Chepkorir, 2024; Maina, 2024; Luyiggo & Aupal, 2024), which is why the research question of how participating monitoring and assessment processes can serve to optimize effectiveness of such programs there by overcome consistent problems with implementation is critical.

There are programmatic and policy obstacles that typically restrict the performance of the MCH programs (; Ministry of Health, 2023). It is reported that the informal settlements in the county have acute health inequalities, with the maternal mortality rates approximately being twice as high as the national average (Weru, 2024; Ombere, 2025; Chepkorir, 2024; Maina, 2024), which are worsened by overcrowding, poverty, and the absence of access to quality care (Gebremeskel, 2024; Karuga, 2024). The underutilization of participatory M&E approaches is also a concern and this is because of lack of funding, training, and awareness of the advantages of participatory M&E among health managers (Septiono et al., 2025; Ombisa et al., 2025; Elisha, 2025). This should realities should be informing a lead to the reshifting to the context-specific M&E and program frameworks (Wakiaga & Nalugala, 2024). In this paper, these challenges are discussed with references to how structured PM&E processes might be used to foster stakeholder ownership (Longworth et al., 2024) and evidence-based decision-making to enhance program results (Kogen, 2024; Sonnenfeld et al., 2024).

There is also a conceptual gap in operationalization of PM&E in the framework of MCH (Chen et al., 2025; Valderas et al., 2025; Dushkova & Ivlieva, 2024). The existing literature (Mitei & Sigei, 2025; Lesiamito & Ombui, 2024; Kimote & Kimaru, 2024) does not focus on participation being a multi-dimensional process with several stages of planning, data collection, analysis, and utilization (Sonnenfeld et al., 2024; Patton, 2024). Such a monocratic way of approach runs the risk of failing to notice important accountability mechanisms (Salman & Ramsis, 2025; Rogers et al., 2024). That abstraction translates into a lack of clarity in implementation framework and measurement inconsistency, which restrict the comprehension of the role of particular participatory activities on health outcomes (Patton, 2024; Wanimbo et al., 2025; Longworth et al., 2024). In this study, PM&E will be conceptualized and operationalized as a multi-stage process (Kogen, 2024), and with specific components of the process being explicitly tied to specific MCH performance indicators (Ombisa et al., 2025; Chen el at., 2024).

The lack of background information in the present literature restricts the transferability of the results to the context of Nairobi in its unique urban environment. Though other studies such as Mitei & Sigei (2025) in Nakuru County and Lesiamito & Ombui (2024) in Samburu County offer useful information, it is possible that these studies in other geographical and sectoral settings do not fundamentally translate to the complex setting of the MCH environment of informal settlements in Nairobi (Rogers et al., 2024; Nutley & Reynolds, 2013; Gebremeskel, 2024). This paper expertly addresses this and exclusively focuses on a city-county level, namely, Nairobi City County, and how urban dynamics, multiplicity of stakeholder interests, and architecture of a county-level health system influence PM&E processes (Weru, 2024; Ombere, 2025;).

There is a great gap in the theoretical explanation of how participation affects MCH outcomes (Chen et al., 2025; Valderas et al., 2025; Dushkova & Ivlieva, 2024). Most of the works (Kimote & Kimaru, 2024; Salman & Ramsis, 2025) do not have solid theoretical foundation especially when it comes to discussing the empowerment process and power structures through which PM&E can influence the performance of programs (Sonnenfeld et al., 2024; Karuga, 2024). This paper therefore fills this gap by developing its investigation based on a strong multi-theoretical framework using Empowerment Theory (Wanimbo et al., 2025) to describe capacity-building, Utilization-Focused Evaluation (Patton, 2024) to describe the connection between process and use

of findings, and Stakeholder Theory (Freeman & McVea, 2001) to describe the dynamics of engagement which will allow developing a comprehensive explanation model.

There are major gaps in methodology used in the preceding research, which reduces the validity and reliability of evidence. Research (Hasan, 2024; Chebiego & Kyule, 2025) often uses single methods, including the most common form of quantitative surveys that describe what is occurring in PM&E, but do not address the how and why of participatory processes and their causal factors (Valderas et al., 2025; Dushkova & Ivlieva, 2024; Ochen-Ochen, 2025; Ombisa et al., 2025). This means it that a more holistic approach is required. Regarding this research, the combined research design method will serve as a solution through integrating quantitative data on relationship strength and qualitative research on lived experiences and practice-based mechanisms of participation among frontline health workers and beneficiaries.

There is still an empirical gap that covers the overall effects of the full process of PM&E on MCH performance. Although they have isolated evidence, they have not had a comprehensive view of the cumulative effect of all the phases (Luyiggo & Aupal, 2024; Elisha, 2025). The research will produce a strong multi-level evidence of how the entire PM&E process, including collaborative planning and application of the findings, as a whole affect the key MCH outcomes in the Nairobi City County.

Based on these interrelated gaps, the research question is as follows: How does the participatory monitoring and evaluation process have an impact about productivity regarding maternal and child health initiatives in Nairobi, Kenya?

Value of the Study

This research has critical approach effects to Kenya because it has demonstrated evidence-based measures to improve the implementation of devolved health services as part of the pillar of Universal Health Coverage in Kenya's devolved health environment. The results will provide the Nairobi City County Health Department and Ministry of Health in the country with a tested framework of institutionalizing participatory M&E in maternal and child health programs, ultimately improving accountability systems and resource allocation mechanisms towards better health outcomes.

The research is valuable in terms of theoretical development since it empirically validates and advances the combination of Empowerment Theory, Utilization-Focused Evaluation, and Stakeholder Theory in a public health setting. By filling essential gaps in the theoretical bases, it explicates causal mechanisms by which participatory processes generate empowerment and impact program performance and may result in a new middle level theory of participatory health appraisal in resource-limited contexts.

In the context of project management practice, the proposed project plays a part to the present body of awareness by designing contextualized approaches towards implementing participatory M&E regarding complex health programs. The results will offer project managers and M&E professionals with effective stakeholder engagements, participatory data collection and collaborative decision-making evidence that will promote project ownership and sustainability.
The research will encourage the future development of a research by developing new areas of investigation into the longitudinal effects of monitoring and assessment participatory plus cross-sectoral application. This developed conceptual framework and methodological approach can be viewed as a template on an identical study in various regions and health areas, entering a new wave of academic investigation on the adaptive participatory evaluation models.

REVIEW OF RELATED LITERATURE

Theoretical Foundation

Empowerment hypothesis is the anchoring theory for this study with Complexity Theory with Utilization-Focused Evaluation (UFE), Stakeholder Theory and Structuration Theory as the supporting theories.

Empowerment Theory

The anchoring theory for this study is Empowerment Theory, developed by Julian Rappaport and widely circulated in community psychology since the 1980s (Zimmerman, 2000; Kitsantas et al., 2025; Shearer, 2009; Wilkinson, 1998). This theory is selected as the primary theory because it directly conceptualizes participation not just as a methodological implement rather a fundamental

method for fostering control, critical awareness, and resource acquisition among community members, which is the ultimate aim of a participatory M&E process in maternal and child health. Its assumptions are highly relevant stating that empowerment occurs at multiple levels, including individual, organizational, and community, aligning with the study's variables from individual data collection to program-wide performance and that problem definition and solution should originate from within the community, thus justifying participatory processes of planning and data analysis. Furthermore, empowerment contributes to better well-being and more effective institutions, offering a rational channel of describing better health performance in program. This theory contextualizes the participation in a sense where it is viewed as a situation of power and capacity, as opposed to an ordinary technical procedure.

Utilization-Focused Evaluation

Utilization-Focused Evaluation (UFE) invented by Michael Quinn Patton and has played a vital role in the evaluation profession since the late 1970s (Patton, 1997; Patton, 2011; Ramírez et al., 2017). This theory is critical because it gives the critical justification of including participants in the project review and assessment process to ensure the results are actually utilized through decision making and improvement of the program. Its fundamental assumptions underpin the focus of the study. First, that the value of an evaluation is to be decided when it is used by its target audience. Second, the target users should be established and involved in the process to fulfill their practical requirements in the evaluation. Third, that evaluators facilitate a process of learning and not just give out a verdict. By focusing on utility and practical application, UFE unwinds possible or current orientation in which M&E exercises are carried out in a procedural formality, without actual effect on the health outcomes.

Stakeholder Theory

Theory of the Stakeholder (Freeman et al., 2010; Davila, 2024; Valentinov and Roth, 2024; Friedman and Miles, 2002), first defined by R. Edward Freeman in the strategic management literature of the 1980s is essential to determine who should be included in the participatory process and to manage the intricate relationships between different groups, including community health workers, beneficiaries, county health officials, and NGOs. Its pertinent assumptions are that

organizations and projects should generate value to all parties involved rather than only funders and that stakeholder process in which all the stakeholders are actively engaged in securing commitment and enhancing results is vital. It further views that more sustainable and effective projects come as a result of knowing and balancing various interests. The Stakeholder Theory offers a systematic way to think about participation, which will ensure that the research investigates the roles, interests, and impacts of all the important agents within the monitoring and evaluation system.

Structuration Theory

Structuration Theory, introduced by Anthony Giddens in the early 1980s and the late 1970s (Giddens, 2014; Anam, 2025; Warf, 2025) offers a fine-tuned approach to the processes by which the participatory actions of individuals are enabled and limited by social structures (rules, norms, power relations among the health system), and how the individuals then can reproduce or change the structures over time. Its major assumptions involve the fact that structure and agency are a duality, that is, they cannot be perceived independent of each other. It also observes that actors deploy their knowledge to maneuver and control the systems that they belong to. Moreover, social practices remain recursive and have the ability to influence systemic change. The Structuration Theory proposes a dynamic framework to describe how the participatory M&E process may possibly transform very institutional norms and the power relation that tends to encumber the real engagement of community and the meaningful use of data in public health systems.

Empirical Literature Review

This segment assesses the empirical literature, with emphasis on the topic of participatory monitoring and evaluation planning, data collection, data analysis and discoveries and the performance of maternal and child health programs.

Participatory M&E Planning, Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Luyiggo and Aupal (2024) observed linkage between shareholder management in Participatory Monitoring and Assessment and Organizational stability in SACCOs and in the Uganda National Teachers' Union (UNATU). They used a mixed method approach and gathered data using

structured questionnaires, interviews, and documentary reviews and established a durable optimistic connection (r = 0.520) amongst stakeholder management and Organizational sustainability, concluding that stakeholder involvement is vital to the longstanding viability. Nevertheless, it was mentioned in the study that the economic model of the SACCO had not been significantly altered even after the shift to sustainable development, and financial activities were still evaluated in terms of traditional criteria, which constitutes another significant research gap in the application of PM&E in making the holistic and non-conventional transformation of sustainability through cooperative societies. The present study fulfills this by placing the contextual and empirical emphasis on the public health sector (Maternal and Child Health projects in Nairobi, Kenya) that sustainability is characterized not only by economic indicators but also by the social outcomes.

Using stakeholder, agency, resource mobilization, and Vroom expectancy theories, Elisha (2025) examined how participatory monitoring and assessment effect performance on the county-funded infrastructural developments in Bomet county, Kenya. A graphic and descriptive review strategy was adopted through the sample consisting of 201 participants that included community members, technical experts, contractors, and county officials as sample sizes, thereby utilizing questionnaires to gather quantitative data. It discovered that their technical expertise, teamwork, motivation, and management skills were highly rated and significantly positively affected the outcomes of the project. Nevertheless, it had a methodological research gap because it focused on quantitative surveys only, which restricts the deep exploration of the processes of participation, and a conceptual gap due to the lack of explicit deconstruction of the planning phase of PM&E. The research gap is primarily methodological in nature since the lack of qualitative data collection will not allow exploring in-depth the interpersonal and power relationships underlying the practice of participatory planning.

Participatory Monitoring and Evaluation Data Collection, Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Mitei and Sigei (2025) investigated the impacts of monitoring and evaluation participatory as methods which control an output of the Ajira Digital Program in Nakuru County, Kenya, using Self-Determination Theory, and Diffusion of Innovations Theory. The research design used was

descriptive design, participatory baseline data gathering of numerical data using surveys which were structured, allocated to 125 respondents at the program center. It established that both participatory decision-making and participatory capacity building positively and significantly influenced the improve effectiveness of the program. Nevertheless, the study had a contextual research gap as its results are limited to one county and one digital skill program, which cannot be individually generalized, and a conceptual gap because it addresses only one of the PM&E practices, namely, decision-making and empowerment, regardless of the others, such as collecting data and stakeholder management. Research gap is contextual because the generalizability of the findings on background of MCH interventions on another setting such as the Nairobi City County has not been validated.

Lesiamito and Ombui (2024) investigated how participatory monitoring and assessment contributed towards the efficiency of farming schemes in Samburu, Kenya, built on the empowerment system and realistic evaluation philosophy. The research was designed as a descriptive and inferential research with the primary quantitative data collected with questionnaires distributed to 109 project staffs among 44 agriculture projects. It established a statistically significant correlation between both participatory baseline data collection ($r = 0.761$, $p = 0.000$) and participating capacity building ($r = 0.655$, $p = 0.000$) and better results of the project. Nevertheless, this study contained a methodological research gap in the application of purely quantitative data on the project staff, which restricts the investigation of the qualitative, experiential nature of the participatory process as perceived by the community, and a contextual gap because the findings are relevant to arid agriculture projects in one county of Kenya. The gap in the research is methodological as the lack of qualitative data gathering techniques denies a more in-depth insight into how and why the performance is influenced by the practice of participatory data collection in the background of this particular investigation.

Participatory M&E Data Analysis, Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Salman and Ramsis (2025) employed a participatory action research (PAR) approach in the study by creating participatory monitoring, evaluation, and learning (MEL) practices in the Arts for All project case study conducted in 2019 to 2022 in Egypt. The researchers identified that the

achievement of the nine iterative steps of PAR made project team and communities strong as they generated substantial changes in power dynamics associated with decision-making, knowledge production, and accountability. Nevertheless, the research had a theoretical research gap because it was not clearly positioned on a particular theory and had a methodological gap since it focused on a solo case analysis, which constrained a scope of the research by generalizing the results on building fair MEL practices. The research gap is methodological because the results regarding the application of participatory data analysis, though encouraging, involve a restricted arts-based environment in Egypt and their relevance to maternal and child health initiatives around Nairobi City County, Kenya, remain uninvestigated.

Kimote and Kimaru (2024) evaluated the strategies to reinforce monitoring and evaluation; in particular, they studied how participatory monitoring and assessment influences the work on developing project teams within Machakos, Kenya, through theoretical change as the guide. The methodological framework was a mixed-methods study, using a survey and key informant interviews based on a census of 102 program implementers who carried out projects funded by donors and analyzed quantitative data in SPSS and qualitative data in thematic analysis. It discovered that most respondents (58.2) expressed the view that the participation of all the concerned parties in preliminary project design enhances M&E and the stakeholder comments were usually used to enhance project delivery meaning that participatory data is effective in informing project implementation. Nevertheless, it had a theoretical research gap in that it was based solely on the Theory of Change without including other relevant theories, such as empowerment or stakeholder theory, capable of better explaining the power dynamics and motivation factors in participatory data analysis, and an empirical gap in that it identified one major impediment (71% of respondents) facing project teams using M&E as a weapon, yet failed to empirically explore how to mitigate this intercept. A theoretical research gap is pronounced because the absence of multi-theoretical framework constrains the comprehension of socio-political and psychological aspects, which shape authentic participatory data analysis.

Participatory Utilization of M&E Findings, Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

In this research, Ombisa, Bowa, and Aseey (2025) investigated the combined impact of the

leadership practices, stakeholder involvement, and clarity of findings on customs of monitoring and assessment findings on Non-governmental organizations within Nairobi City, Kenya, based on the Utilization-Focused Evaluation (UFE) theory. This study utilized a combined research design, collecting data by use of structured surveys and key informant discussions on categorized casual sample of 283 NGOs, and discovered that the effect of leadership practices and stakeholder participation had a constructive and statistically important effect on the usage of project review and assessment results but that an outcome on clarity from findings was not statistically significant. Nevertheless, the study had a conceptual research gap of treating NGOs as a homogenous group and did not analyze the workings of these factors in particular domains such as motherly and child well-being, and a methodological gap in that it has established correlation but not how leadership or participation facilitates utilization. The contextual gap is the key research gap because the study is general strategies to improve M&E use but it does not define how these measures would be implemented in the context, limitations, and stakeholder relationships of the specific public maternal and child health programs.

Ochen-Ochen (2025) studied how monitoring and evaluation politics influence the generation and utilization of evidence in Communal-Based Natural Incomes Organization projects within Western Uganda identified the impact of politics, by exploring qualitative research approach, ethnographic research strategy. The study gathered data gathered data using qualitative data collection techniques of in-depth interview, document analysis and participation observation with community, conservation organizations, and community leaders. The research established that the monitoring and evaluation exercise was politically geared towards the production of performance evidence that mainly favored the needs of the donors, and which had little use by the locals, but the political leaders required the monitoring as a way of accumulating political capital. Nevertheless, the paper has a theoretical research gap since it does not base its investigation of the dynamics of political forces on a particular theoretical framework to elucidate the power and influence mechanism and a contextual gap because the findings are presented within the conservation sector of the Western Uganda, in comparison to the context on MCH programs around Nairobi, Kenya. The study gap is theoretical because the lack of a specific framework, say, empowerment or stakeholder theory, constrains the systematic insight into the ways such as political interests determine the participatory implementation of the findings.

Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Kibet plus Mungai (2025) reviewed the dependence among the evaluation and monitoring mechanisms and the effectiveness of the Linda Mama maternity healthcare initiative within West Pokot County; Kenya through the theoretical change and pecking order theory. The study used a descriptive study strategy, whereby quantitative data collection through questionnaires on the sample of 236 healthcare workers and M&E officers and the study results established a positive role of M&E budgeting (0.479) and organizational structure (0.461) as statistical significant in influencing the performance of the programs. Nonetheless, the research has a scientific research gap in that it depends on completely on numerical approaches, which limits the use of participatory mechanisms involved in the data utilization by community stakeholders and healthcare beneficiaries in decision-making and lacks a conceptual gap in its approach to the issue since the internal organizational factors are considered without addressing the power dynamics and participatory processes that define the data utilization. The most significant gap in the research is a methodological one because the lack of the qualitative data does not allow the deeper comprehension of how the utilization of findings as one of the core factors of the monitoring and evaluation participatory is implemented and lived out by the targeted beneficiaries within the particular context of a maternity and child health program.

Chebiego and Kyule (2025) examined how technological tools could alter the quality of monitoring and assessment of health projects around Nairobi, Kenya, which is directly applicable to this analysis on maternal and child health projects. This research adopted the descriptive study strategy where data was collected through questionnaires focusing on 60 employees at management level and they were analyzed through the regression model and the data analysis tools were found to be the best predictor of M&E effectiveness, which significantly improved data-driven decision-making in program performance. Nonetheless, the study has a conceptual research gap in its failure to connect technological solutions to particular MCH performance measures (e.g., maternal mortality, immunization rates) and a methodological gap in its exclusively managerial focus thereby eliminating the possibility of participatory application of M&E findings by community health workers and beneficiaries who are pivotal to MCH outcomes. The research void

is methodological in nature in that the study does not focus on how technologies can enable or impede the participatory process of accessing M&E data as part of the frontline MCH stakeholders to improve effectively as one group towards enhancing program performance, which is the major objective of this current proposed research.

Goh et al. (2025) performed a systematic review of the facets that affect the output and engagement of the public health staff on service delivery of the MCH programs in developing countries in Asia, based on the socio-environmental model as a basis. The article summarized 30 studies and discovered that a combination of multi-level factors such as individual capabilities and motivation, interpersonal support, organizational resources, community processes, and health system-wide policies influences CHW performance and engagement. There is however, a high evidence gap since the study is a preprint that has not received a peer review, thus restricting the credibility of its findings in informing policy and a contextual gap since its findings are only applicable to the Asian countries, which might not be relevancy to the Kenyan context in terms of vital social, cultural and health system factors. The proposed research gap is contextual in nature because the replicability of the formulated multilevel factors, especially community dynamics and health system policies toward the performance and engagement of community health workers in Nairobi City County, Kenya has not been previously investigated and substantiated.

Conceptual Framework

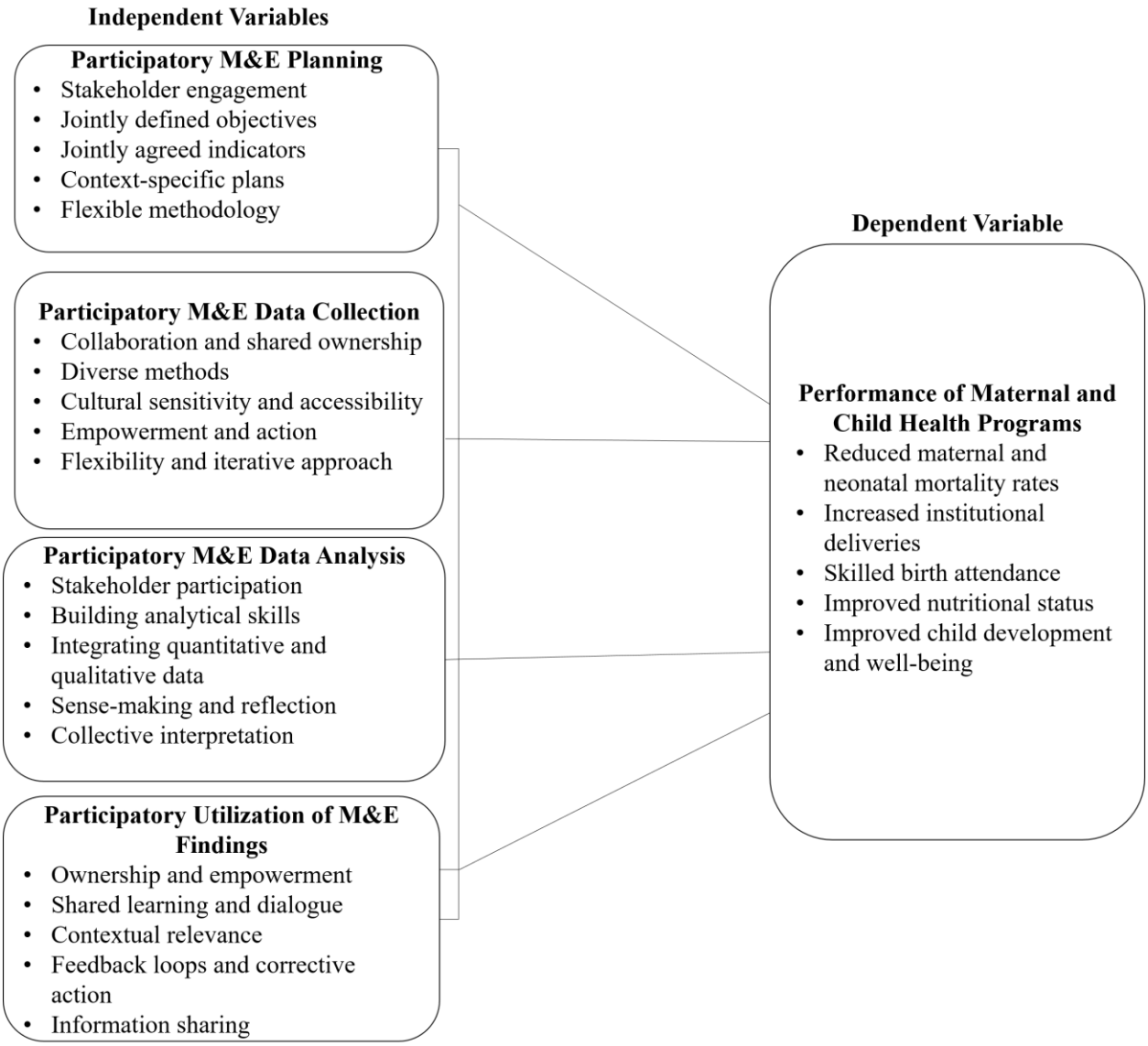

Figure 1: Conceptual Framework

METHODOLOGY

This section defines a study on philosophy, methodology, focus population, study plan, collection of statistic approaches, validity plus reliability procedures of this study. It also describes how variables are operationalized and data analysis procedures used to test study hypotheses.

Research Philosophy

This methodology of this study is Positivism (Park et. al., 2020). This method is built on the application of the scientific methods plus use of observable and measurable facts to generate objective facts and reveal laws governing social phenomena (Yao, 2024). The positivist postulates that there is one external reality that can be studied using systematic observation and quantification to eliminate bias and guarantee replicable and value-neutral results (Flick, 2024; Ali, 2024). It is characterized by placing an emphasis on empirical evidence, the hypothetical-deductive model of verifying theories, and employing statistical methods to study a large sample size and extrapolate the results (Flick, 2024; Ali, 2024).

The relevance of positivism to the study of the Efficiency of MCH Programs is that its quantitative, objective framework is needed to gauge and determine the causal relationships between participatory monitoring and evaluation strategies and program effectiveness (Takona, 2024). This paradigm is consistent with health research because it facilitates the establishment of standardized, empirical measures of performance and inform policy, improve care and allocate resources where generalizable and objective information exists on MCH outcomes (Padmaja, 2024; Ali, 2024).

Research Design

This chosen design of this research is a vivid consecutive diverse approaches strategy (QUAN = QUAL) (Creswell & Plano Clark, 22018; Ivankova, Creswell, and Stick, 2006). Mixed design is a type of design where quantitative data (QUAN) is compiled and studied to identify general patterns, subsequently qualitative data (QUAL) is compiled and evaluated to elucidate, expand on, or provide more context to the first quantitative data (Creswell, 2024; Ataman et. al., 2025; Salajegheh et. al., 2024).

The design is quite applicable when researching MCH programs because it enables the researcher

to utilize the quantitative phase in order to determine the "what works" (e.g., finding significant correlations between PM&E and performance), and, then, the qualitative phase to explain the how and why of such patterns (Creswell, 2024; Padmaja, 2024).

This two-step methodology will improve validity and reliability of results and provide a broader perception of complicated healthcare problems and consequently more effective and evidence-based interventions to improve the MCH Program performance (Creswell, 2024).

Population of the Study

The target population are Program Managers, Doctors/Gynecologists, Nurses, Clinical Officers, MCH Coordinators/Specialists and Community Health Promoters/Nurses working in MCH programs in Nairobi County.

Table 1.1: Focus Population for Maternal and Child Health Programs in Nairobi City County

No.	MCH Program Approach (Based on Evidence-Based Approaches)	Total MCH Programs Implementing the Approach	Target Respondents (By Role)	Total Respondents
1	Continuum of Care	6	6 Program Managers, 6 MCH Coordinators, 12 MCH Nurses/Specialists	24
2	Community Health Worker (CHW) Involvement	8	8 Program Managers, 8 Clinical Officers, 8 CHPs/Community Health Nurses	24
3	Integrated Service Delivery	5	5 Program Managers, 5 Doctors/Gynaecologists, 5 MCH Specialists	15
4	Data-Driven Monitoring and Evaluation	4	4 Program Managers, 4 M&E/MCH Coordinators, 4 MCH Nurses/Specialists	12

5	Routine Home Visitations	7	7 Program Managers, 7 CHPs/Community Health Nurses, 7 Clinical Officers	21
6	Participatory Women's Groups	4	4 Program Managers, 4 MCH Coordinators, 4 CHPs/Community Health Nurses	12
7	Free Maternity Services	2	2 Program Managers, 2 Doctors/Gynecologists, 2 MCH Nurses	6
	Total	**36**		**114**

Source: Nairobi City County Health Services Records, 2025

Sample Size and Sampling Method

As a part of the scope of this study, census method was used to sample respondents (Babbie, 2020). The focused-on people will comprise 114 respondents who represent the 36 MCH Projects around Nairobi. Census method was selected to provide maximum accuracy and reduce sampling error by covering all the members of the specified population (Babbie, 2020; Willie, 2024). By doing so, it will be possible to examine how well the monitoring and assessment participatory approaches, strategies have influenced the efficiency of all identified MCH programs in the County, the estimates will not be prone to sampling error (Bafarasat, 2024).

Data Collection

A 5-point Likert scale organized survey will be used as a quantitative tool (Kumar, 2024). This questionnaire will be carried out online via WhatsApp due to its use and its access to the target respondents in the county of Nairobi City.

This data will also be gathered in the form of qualitative data through virtual in-depth, semi-structured interviews (Kahlke et. al., 2025). The interviews are to be conducted via WhatsApp with the use of video and voice calling features of the platform. It also allows the researcher to investigate how and why the quantitative findings in order to provide rich contextual stories and deep accounts of monitoring and assessment participatory methods of MCH Programs (Creswell, 2024). It is planned that the interviews will last 30-45 minutes and will be programmed with

investigative questions to get an in-depth depiction of the challenges and achievements related to PM&E and MCH programs performance (Kahlke et. al., 2025).

Operationalization of the Study Variables

This table of contents below operationalizes the factors in this study there by putting into context the impact of Performance of MCH Programs in Nairobi based on the effect of the Participatory Monitoring and Evaluation methods.

Table 1.2: Operationalization of Variables

Objectives	Variables	Indicators	Scale of Measurement	Research Approach	Types of Statistical Analysis	Tools of Data Analysis
To establish the joint influence of PM&E processes on MCH program performance in Nairobi County.	Independent Measures: X1, X2, X3, and X4 (Combined)	See pointers for each variable above	Interval (Likert Scale)	Quantitative/Qualitative (Mixed Methods)	Parametric (Assumption checks required)	Multiple Linear Regression, Correlation analysis
	Dependent Variable: Performance of Maternal and Child Health Programs (Y)	- Achievement of MCH program targets (e.g., ANC/PNC attendance, skilled delivery rates) - Efficiency of resource utilization in MCH - Stakeholder	Interval (Likert Scale)	Quantitative/Qualitative (Mixed Methods)	Parametric (Assumption checks required)	Descriptive analysis, Correlation analysis, Simple linear regression

Objectives	Variables	Indicators	Scale of Measurement	Research Approach	Types of Statistical Analysis	Tools of Data Analysis
		satisfaction with MCH service quality - Equitable access to MCH services				

Validity and Reliability Tests

In order to determine content cogency, the two experts in the subject matter who will be the project supervisors at the Nairobi University will be provided with the devices to determine areas where the device is very valid, valid, somewhat relevant, or not valid on a scale of very valid (4), valid(3), somewhat valid (2), and not valid (1) (Flanagan and Beck, 2024). Validity will be established by Content Validity Index (CVI) (Flanagan & Beck, 2024).

CVI= $\frac{Sum\ of\ item\ rated\ 3\ or\ 4}{Number\ of\ Quetionnaire\ items}$

CVI= Objects rated 3 or 4 by equal professionals separated by an overall quantity on objects within the questionnaire.

This process aims to achieve a validity index that is higher than the edge of 0.7 as suggested by Cohen & Swerdlik (2010) (Flanagan & Beck, 2024). Hypothesis strength can be assessed by analyzing whether a reliable substantial quantity of high scores in objects studying independent measures connected ambivalently with scores on objects inspecting the measured variable (Willie, 2024). This will be done by comparison of several scores from different topics (Alavi et. al., 2024). The consistency of the study devices will be established to ensure their consistency in yielding similar results when repeatedly applied to the same target population (Kalkbrenner, 2024). A pre-test reliability approach will be used to establish the reliability of the instruments over time (Ahmad et. al., 2024). The rectified questionnaire will then be tested again to confirm that the final questionnaire has reached the indorsed reliability edge of 0.70 as proposed (Ahmad et. al., 2024) and then incorporated into the study. This research determines use of Cronbach's alpha coefficient

to evaluate consistency on rating-scaled study (Kalkbrenner, 2024). Items will be carefully reviewed and deleted as necessary to exploit their consistency factor. The resulting coefficients will be linked against a edge of $\alpha \geq 0.70$, which is the recommended coefficient test for reliability according to Cohen & Swerdlick (2010) (Field, 2024).

Data Analysis

This study employs vivid and analytical data on study statistics (Field, 2024; Creswell, 2024; Collet et. al., 2025). Descriptive statistics involve quantitative and qualitative data analysis while analytical numbers involve testing of research theories using link and reversion examination (Field, 2024).

For inferential statistics, Pearson correlation co-efficient will be utilized to test the connection between the experimental factors and non-experimental factors, in order to discard the valueless theory. The valueless theory will be tested for significance at $\alpha=0.05$ significance level (Bougie & Sekaran, 2025; Sekaran, 2006) result principle, giving to which the Valueless theory will be excluded is if P-value < 0.05; or then, it is acknowledged.

Table 1.3: Data Analysis Model and Interpretation

No.	**Objective**	**Hypothesis**	**Tools of Analysis**	**Analysis Model**	**When to Accept or Reject H0**
1	To create the joint effect of all monitoring and evaluation participatory processes on efficiency of MCH programs around Nairobi City, Kenya.	H05: No evidence of substantial effect of combined participatory monitoring and assessment processes on efficiency of MCH programs within Nairobi City, Kenya.	Numerous Lined Reversion Examination	$Y=\beta0 +\beta1X1 +\beta2X2 +\beta3X3 +\beta4X4 +\epsilon$	Accept H0: P-Value>0.05

Key: Y = Performance of MCH Programs; X1−4 = The four independent PM&E variables; β0−4 = Reversion factors; ϵ = Error term.

Ethical Considerations

This study avoids any form of research misconduct, including data fabrication, falsification, and plagiarism, in order to guarantee adherence to professional and ethical norms. The University of Nairobi will provide the researcher the required authorization. All study participants will receive a complete description of the study's purposes. This process will ensure that individuals agree to participate voluntarily and are well informed about the research. The collected data will be handled with the highest confidentiality. Research participants will receive assurances about the safety of their data.

FINDINGS/RESULTS

This section shows the research results that are presented in a cross-sectional manner across several theme-based areas: survey return rate, population data, and four key components on Participatory Monitoring and Evaluation approach relation to performance of Maternal and Child Health (MCH) Programs. The theme-based areas reflecting on the study's independent variables are: Participatory monitoring and evaluation Planning, Participatory Data Collection, Participatory M&E Data Analysis Plus Participatory Use of monitoring and evaluation Results

A final thematic area combines these four PM&E components to examine their overall joint influence.

This final objective addresses the combined influence of all PM&E processes which is analyzed using descriptive statistics, with the inferential analysis utilizing numerous reversion studies to examine for the joint important connection. All statistical analyses were discussed simultaneously within their respective sections to provide a comprehensive and integrated view on findings.

Questionnaire Return Rate

From a census on an entire target population of 114 individuals, 114 questionnaires were issued to study participants. This is further detailed in Table 1.4.

Table 1.4: Questionnaire Return Rate

Respondent	Population	Returned	Return rate

Number	114	114	100%

From a census of the entire target population of 114 individuals involved MCH Programs, 114 questionnaires were issued to study participants. The 100% questionnaire return rate (114 out of 114 respondents) is highly adequate for gathering sufficient data related on performance of Maternal and Child Health (MCH) programs in Nairobi.

Achieving 100% return rate, especially in a census, completely eliminates the risk of non-participation partiality. This guarantees that the views, experiences, and information on program performance collected are fully representative of the entire defined population of MCH program personnel. Any conclusions drawn about program performance are therefore not skewed by the omission of data from certain staff roles or programs.

Demographic Characteristics of Maternal and Child Health Programs in Nairobi City County

This demographic profile of the 114 respondents is necessary primarily to provide a foundational context for understanding the key characteristics of this study participants in relation to this current study.

Data were systematically collected on key variables related to the respondents' involvement in MCH Programs. These variables provide essential context for interpreting the findings on PM&E and program performance: Respondent Roles/Positions: (e.g., Program Manager, Nurse, MCH Coordinator), Specific Evidence-Based MCH Program Approaches implemented (e.g., Continuum of Care, CHW Involvement) and Funding Sources for the MCH Programs. These characteristics are presented in the subsequent sections, starting with Table 1.5.

Table 1.5 Characteristics of Maternal and Child Health Programs in Nairobi City County

(n=114)

Characteristics	**n(f) frequency**	**(%) percent**
Position/Role in the Maternal and Child Health Program/s	**(n=114)**	**(Sum =**

Characteristics	**n(f) frequency**	**(%) percent**
		100.0%)
Program Manager	10	8.8
Doctors/Gynaecologist	15	13.2
Nurse -MCH	30	26.3
MCH Coordinator	12	10.5
Clinical Officer	14	12.3
Maternal, Newborn, and Child Health and Adolescent Coordinators	8	7.0
Maternal and Child Health Specialist	5	4.4
Community Health Promoter (CHP)	12	10.5
Community Health Nurse	7	6.1
Other	1	0.9
Total Respondents	**114**	**100.0**
Evidence Based MCH Program Approaches	(**Multiple Response**)	
Continuum of Care	95	83.3
Community Health Worker (CHW) Involvement	102	89.5
Routine Home Visitations	75	65.8
Participatory Women's Groups	40	35.1
Community Outreach	105	92.1
Data-Driven Monitoring and Evaluation	88	77.2
Health Education and Counseling	110	96.5
Strategic Partnerships	65	57.0
Integrated Service Delivery	98	86.0
Free Maternity Services	108	94.7
Other Approaches	5	4.4
Sources of Funds for the MCH Program/s	(**Multiple Response**)	
Nairobi County Government Budgets	85	74.6
Out-of-Pocket Expenditure	60	52.6
Ministry of Health	105	92.1
Social Health Authority (SHA)	35	30.7
International Donors	98	86.0
Philanthropic Foundations	45	39.5

Characteristics	n(f) frequency	(%) percent
Private Sector Funding	20	17.5
Other Sources	5	4.4

Basing on the information on provided Table 1.5 for MCH Programs around Nairobi City County, the subsequent statistical implications can remain drawn regarding the personnel involved, evidence-based practices, and funding structure.

Performance of Maternal and Child Health Programs in Nairobi City County

The mentioned above served as the dependent variable in the study. Building on both hypothetical and experimental frameworks, the research identified ten key indicators of Performance of MCH Programs. To measure these indicators, respodents answered to a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

For primary data analysis, this ordinal scale was statistically transformed into an equidistant, or interval, scale to meet the expectations of model based statistical methods used in the study. The qualitative interpretation of the results followed Nyutu's (2021) categorization, where mean scores were interpreted as follows: a point range of 1.00 - 1.80 for strongly disagree, 1.81-2.60 for Disagree, 2.61-3.40 for Neutral, 3.41-4.20 for Agree and 4.21- 5.00 for Strongly agree.

The information was then examined and presented using graphic numbers, including rates, fractions, means, and variability for each entry. Both individual items mean and variability, as well as composite means and average deviations, were designed and presented in Table 1.6.

Table 1.6: Performance of Maternal and Child Health Programs

STATEMENTS	SA	A	N	D	SD	Mean	Std. dev	skewnes
1 Maternal and child health programs in Nairobi City County have shown positive outcomes, including lower maternal mortality rates.	26(22.8%)	43(37.7%)	30(26.3%)	9(7.9%)	6(5.3%)	3.65	1.08	-0.672
2. MCH facilities frequently experience drug stockouts and a shortage of crucial equipment like resuscitators and ultrasound machines.	31(27.2%)	44(38.6%)	29(25.4%)	6(5.3%)	4(3.5%)	3.81	1.01	-0.749
3.There is a persistent shortage of trained healthcare workers, leading to long wait times and contributing to the perception of poor-quality care.	35(30.7%)	43(37.7%)	23(21.9%)	5(4.4%)	6(5.3%)	3.84	1.08	-0.932
4 Enhanced antenatal care packages and the free maternity policy have increased access to maternal care.	30(26.3%)	42(36.9%)	30(26.3%)	9(7.9%)	3(2.6%)	3.76	1.02	-0.590
5. Women often report experiencing disrespectful maternity care and a lack of privacy at facilities, which can deter them from seeking care	27(23.7%)	46(40.3%)	27(23.7%)	9(7.9%)	5(4.4%)	3.71	1.05	-0.734
6. Many MCH facilities lack essential space, beds, and water, particularly in informal settlements, limiting capacity and quality of care.	38(33.3%)	45(39.5%)	22(19.3%)	4(3.5%)	5(4.4%)	3.94	1.03	-1.05
7. Frequent health worker strikes have disrupted the delivery of essential MCH services, leading to challenges in access and maintaining continuity of care.	38(33.3%)	49(43%)	20(17.5%)	2(1.8%)	5(4.4%)	3.99	0.991	-1.20
8 There are ongoing challenges with the availability and standards of MCH equipment, essential commodities, and infrastructure in health facilities	30(28.3%)	56(49.1%)	18(15.8%)	4(3.5%)	6(5.3%)	3.88	1.01	-1.20
9. Maternal and child health programs in Nairobi face significant challenges including	35(30.7%)	48(42.1%)	21(18.4%)	5(4.4%)	5(4.4%)	3.90	1.03	--1.04

financial barriers like the cost of care and unreliable transport								
10. High costs for MCH services, medicines, and transportation create a significant barrier, especially for low-income households in informal settlements	43(37.7%)	37(32.4%)	23(20.2%)	5(4.4%)	6(5.3%)	3.93	1.11	-1.00
Composite mean &						**3.84**	**1.01**	
Composite standard deviation								

This analysis examines the Performance of MCH Programs, which serve as a dependent variable. The study used an explained Progressive Combined Method Strategy where numerical data from a comprehensive MCH service utilization survey was collected and analyzed first, followed by descriptive data from target interviews and participatory group sessions to explain the initial statistical findings.

Phase 1: Quantitative Data Analysis

Based on Table 1.6, It indicates the performance of MCH Programs around Nairobi City County faces significant challenges and successes. The data indicates a general agreement among respondents on the issues, a composite mean of 3.84 and a composite variability of 1.01. The mean submits that respondents perceive that while as the programs have positive outcomes, critical operational and access barriers persist. The low composite variability shows a high degree of consensus midst respondents regarding the status of MCH program performance. Similarly, ten indicators of performance of MCH Programs within Nairobi City County were analyzed and presented in the following sub thematic areas

Statement 1: "*Maternal and child health programs in Nairobi City County have shown positive outcomes, including lower maternal mortality rates*." With a mean of 3.65 and a combined agreement rate of 60.5% (22.8% strongly agreed, 37.7% agreed), respondents generally believe that MCH programs have shown positive outcomes, including lower maternal mortality rates. This finding suggests that despite existing challenges, the programs are perceived to be effective in achieving core public health objectives. Variability of 1.08 (close to the compound) indicates a

high level of consensus on this overall positive impact.

Statement 2: *"MCH facilities frequently experience drug stockouts and a shortage of crucial equipment like resuscitators and ultrasound machines."* With a mean of 3.81 and a combined agreement rate of 65.8% (27.2% strongly agreed, 38.6% agreed), respondents strongly agree that MCH facilities frequently experience drug stockouts and a shortage of crucial equipment like resuscitators and ultrasound machines. This implies that challenges in the logistics and supply chain are a major blockade to the value and efficiency on care. Variability of 1.01 (equal to the compound) indicates a strong consensus on this issue.

Statement 3*: "There is a persistent shortage of trained healthcare workers, leading to long wait times and contributing to the perception of poor-quality care."* With a mean of 3.84 and a combined agreement rate of 68.4% (30.7% strongly agreed, 37.7% agreed), respondents agree that a persistent shortage of trained healthcare workers leads to long wait times and a perception of poor-quality care. This finding suggests that human resources for health are a critical bottleneck affecting service delivery and patient satisfaction. Variability of 1.08 (more than the compound) points to some variance in opinions, which might reflect differing staff-to-patient ratios across various facilities.

Statement 4: *"Enhanced antenatal care packages and the free maternity policy have increased access to maternal care."* With a mean of 3.76 and a combined agreement rate of 63.2% (26.3% strongly agreed, 36.9% agreed), respondents believe these targeted programs have been successful. This finding implies that enhanced antenatal care packages and the free maternity policy have been effective in increasing access to maternal care. The standard deviation of 1.02 (close to the composite) indicates a high degree of consensus on the effectiveness of these policies in improving access.

Statement 5: *"Women often report experiencing disrespectful maternity care and a lack of privacy at facilities, which can deter them from seeking care."* With a high mean of 3.71 and a combined agreement rate of 64.0% (23.7% strongly agreed, 40.3% agreed), the data shows that disrespectful maternity care and a lack of privacy are major issues in the MCH system. This implies a pressing need for quality-of-care improvements, staff training on patient dignity and rights, and

infrastructure upgrades to ensure patient-centered care and prevent women from being deterred from seeking essential services. The standard deviation of 1.05 (close to the composite) suggests a strong convergence of opinion on this problem.

Statement 6: *"Many MCH facilities lack essential space, beds, and water, particularly in informal settlements, limiting capacity and quality of care."* With a high mean of 3.94 and a combined agreement rate of 72.8% (33.3% strongly agreed, 39.5% agreed), respondents agree that MCH facilities lack essential space, beds, and water, particularly in informal settlements. This implies that infrastructure deficiencies are a major systemic issue limiting capacity and quality of care. The standard deviation of 1.03 (close to the composite) indicates a strong consensus on the severity of this problem.

Statement 7: "*Frequent health worker strikes have disrupted the delivery of essential MCH services, leading to challenges in access and maintaining continuity of care."* With the maximum mean value of 3.99 with a combined agreement rate of 76.3% (33.3% strongly agreed, 43.0% agreed), respondents overwhelmingly believe that frequent health worker strikes have disrupted the delivery of essential MCH services. This indicates that labor disputes are the most critical challenge affecting continuity of care and overall program stability. The variability of 0.991 (less than the compound) shows a high degree of consensus.

Statement 8: *"There are ongoing challenges with the availability and standards of MCH equipment, essential commodities, and infrastructure in health facilities."* By a mean of 3.88 and the maximum combined contract rate of 77.4% (28.3% strongly agreed, 49.1% agreed), the data shows that ongoing challenges with MCH equipment, essential commodities, and infrastructure are widely acknowledged. This implies a need for sustained investment in capital expenditure and maintenance to ensure the facilities can meet care standards. The variability of 1.01 (equal to the compound) confirms a high consensus on this point.

Statement 9: *"Maternal and child health programs in Nairobi face significant challenges including financial barriers like the cost of care and unreliable transport."* With a high mean of 3.90 and a combined agreement rate of 72.8% (30.7% strongly agreed, 42.1% agreed), respondents confirm that MCH programs face significant challenges including financial barriers and unreliable

transport. This finding highlights that cost and accessibility issues remain major non-clinical barriers to care seeking. The standard deviation of 1.03 (close to the composite) indicates a strong consensus on this issue.

Statement 10: *"High costs for MCH services, medicines, and transportation create a significant barrier, especially for low-income households in informal settlements."* With a high mean of 3.93 and a combined agreement rate of 70.1% (37.7% strongly agreed, 32.4% agreed), this finding indicates that high costs for MCH services, medicines, and transportation are a significant barrier, especially for low-income households. This implies a critical need to strengthen public health financing and social protection mechanisms to ensure equitable access to MCH services across all socio-economic groups. The variability of 1.11 (the highest, subtly greater than the compound) confirms a high consensus on the existence of this barrier.

Phase 2; Qualitative analysis

These discoveries were validated by stake holder interviews who offered the following insights on the performance of MCH Programs:

"This most significant problem is the persistent lack of essential resources and infrastructure, especially in informal settlements, which limits the quality of care despite having a free maternity policy. The frequent health worker strikes further compound this, leading to disruptions in continuous, high-quality MCH service delivery. Even with the services being available, the high cost of transport and medicines creates a crippling financial barrier for low-income families in Nairobi." – K-008

"Despite these challenges, we have seen some real progress. Informants noted that enhanced antenatal care packages and the free maternity policy have been instrumental in improving access to maternal care. They also highlighted that the programs have shown positive outcomes, including lower maternal mortality rates. The next step is to address the critical operational bottlenecks highlighted by the data, such as the persistent shortage of trained healthcare workers and the frequent drug stockouts, to ensure that the increased access translates into high-quality, dignified care for all mothers and children." – K-001

Phase 3; Integration and Conclusion

The study's final stage involved Interpretation and Integration (Phase 3), which was critical for synthesizing the quantitative and qualitative findings into a cohesive understanding of MCH program performance in Nairobi. The quantitative data established a key paradox: a high level of service access and utilization (validated by the positive outcomes mean of 3.65) coexists with an equally high consensus on systemic failures and poor quality of care (indicated by the overall composite mean of 3.84, driven by high agreement on strikes, staff shortages, and infrastructure deficits). The qualitative phase directly addressed this paradox, confirming that the high utilization is maintained not by satisfaction, but despite deep-seated operational and structural flaws. Key informants explained that access gains from policies like free maternity care are immediately undercut by the severe and frequent disruption from health worker strikes (highest mean of 3.99) and the pervasive issues of drug stockouts, lack of essential equipment, and disrespectful maternity care caused by overworked staff. Therefore, the integrated conclusion is that the MCH program is functionally fragile: while policies successfully remove financial barriers to entry, the subsequent experience is consistently undermined by instability and resource scarcity, leading to a performance that is high in volume but critically low in sustained quality and patient dignity.

The Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

The study shows the perspectives of study participants on the joint effect of Participatory Monitoring and Assessment Process and Performance of MCH Programs. This was the fifth objective this study achieved. The outcomes are shown on Table 1.7.

Table 1.7: The Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Joint effect of Participatory Monitoring and Evaluation Process and Performance of MCH Programs	n	Mean	Std. Dev.	Interpretation
Participatory monitoring and evaluation Planning	114	3.84	1.030	Strong Agreement
Participatory Monitoring and evaluation Data	114	3.87	0.990	Strong Agreement

Collection				
Participatory monitoring and evaluation Data Analysis	114	3.90	0.903	Strong Agreement
Participatory Monitoring and evaluation Utilization Findings	114	3.96	0.875	Strong Agreement
Composite Score	114	3.89	0.950	Overall Strong Agreement

The results from Table 1.7 consistently demonstrate a strong positive perceived joint influence of the Participatory Monitoring and Evaluation Process on the Performance of MCH Programs.

All four mechanisms of participatory Monitoring and evaluation process—Participatory Monitoring and evaluation Planning, Participatory Monitoring and evaluation Data Collection, Participatory monitoring and evaluation Data Analysis, and Participatory Monitoring and evaluation Utilization Findings—show high mean scores, underscoring their significant and consistent perceived contribution to the performance of MCH Programs.

The composite mean for the overall Participatory M&E Process is 3.89, with a standard deviation of 0.950. This interpretation of "Overall Strong Agreement" indicates that participants view the full participatory M&E cycle as a necessary and highly important driver of MCH Program Performance. The relatively low standard deviations across all factors suggest a high consensus that these components are inextricably linked to successful MCH Program delivery.

Individually, the factors exhibit the following means and standard deviations (based on n=114 respondents for each):

Participatory M&E Utilization Findings has the maximum mean of 3.96 (Average Aberration 0.875), indicating it is perceived as the most influential component.

Participatory M&E Planning has the lowermost mean of 3.84 (Average Aberration 1.030),

although this still falls within the "Strong Agreement" interpretation.

These findings imply that a complete and fully participatory method to monitoring and assessment is critical to the successful performance of MCH Programs. The high mean scores for all factors indicate that stakeholders perceive strong performance across all crucial M&E steps that directly influence the effectiveness of MCH service delivery. This provides a solid groundwork for future interventions and policy development focused on strengthening the entire participatory monitoring and evaluation method for better program outcomes.

Correlation Analysis of the Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

To determine the correlation between the Joint Influence of Participatory Monitoring and Assessment Process and Performance of MCH Programs, Pearson relationship beta value was run on the overall average of each scale. The respondent at 95% scale of confidence equaled the total scores of the scales as a synopsis of the distinct scores on each entry. The outcomes attained are indicated on Table 1.8.

Table 1.8: Correlation Analysis of the Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Joint Influence of Participatory M&E Processes		Performance of Maternal and Child Health Programs
Participatory M&E Planning in Child Health Programs	*Pearson Correlation*	0.775*
	Sig. (2-tailed)	0.000
	n	114
Participatory M&E Data Collection Child Health Programs	*Pearson Correlation*	0.772*
	Sig. (2-tailed)	0.000
	n	114
Participatory M&E Data Analysis Child Health Programs	*Pearson Correlation*	0.792
	Sig. (2-tailed)	0.000
	n	114
Participatory M&E Utilization M&E Findings Child Health Programs	*Pearson Correlation*	0.810
	Sig. (2-tailed)	0.000
	n	114

Overall joint participatory monitoring and evaluation processes and Performance of Maternal and Child Health Programs	*Pearson Correlation*	0.821*
	Sig. (2-tailed)	0.000
	n	114

*Significant at 0.05 level (2-tailed)

The table 1.8 reveals that all four mechanisms of the Participatory Monitoring and Evaluation Process have statistically substantial, strong positive linear relationship with the Performance of MCH Programs.

Correlation coefficients shows the strength of these individual relationships (all p-values are 0.000 and n=114)

These findings suggest that each participatory monitoring and evaluation factor has a strong individual association with the performance of MCH Programs. The Participatory Monitoring and evaluation Utilization Findings shows the strongest individual correlation (r=0.810), underscoring its pivotal role in translating Monitoring and evaluation work into performance outcomes.

The overall joint influence of these four factors yields a very strong positive correlation of r=0.821 with the Performance of MCH Programs. This highlights that while each factor individually contributes positively, their combined, synergistic influence is substantially more impactful on program performance. The insignificant research proposition that Joint Impact of Participating Monitoring and Evaluation Process does not suggestively impact the Productivity of MCH being rejected.

The consistently low p-values (p=0.000) across all correlations (both individual and joint) provide very strong evidence that these observed relationships are not due to random chance. This leads to the rejection of the insignificant proposition.

Therefore, in conclusion the study shows a highly substantial and very solid constructive correlation between the joint effect of the Participatory monitoring and evaluation Process and the Productivity of MCH Programs.

Regression Analysis of Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Multiple linear regressions were adopted to explore the Joint Influence of Participatory Monitoring and Assessment Process and Performance of MCH Programs. It was important to get participants opinions of the study participants on the effect of Joint Impact of Participatory Monitoring and Evaluation Process and Performance of MCH Programs.

Model summary of Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

This model summary indicates how Joint Impact of Participatory Monitoring and Evaluation Process and Performance of MCH Programs. The estimation model productivity data conclusions are shown in Table 1.9.

Table 1.9: Regression Analysis of Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.821[a]	0.674	0.663	0.4764

a. Predictor, (Constant), Joint Influence on Participatory Monitoring and Evaluation Process

This estimation model summary in Table 1.9 presents key statistics from a regression analysis examining the joint influence of the Participatory Monitoring and Evaluation Process on the Performance of MCH Programs.

R value of 0.821 indicates a very solid constructive multiple relationship. This confirms that when the four mechanisms of the participatory Monitoring and evaluation process are combined, they demonstrate a substantial and highly significant association with improved MCH Program Performance.

R-squared (R^2) rate of 0.674 shows that these processes, working together, explain 67.4% of the variation in the Performance of MCH Programs. This highlights their significant role in predicting

program success.

Adjusted R-squared of 0.663 further shows the approximately 66.3% of the variance that is genuinely accounted for by the joint influence of these factors, even after adjusting for the set of independent variables in the model. The minimal variation between R and Adjusted R2 indicates the model estimate is a robust fit and is not overfitting the data.

The Estimate Error is 0.4764. The relatively small rate means that, on overall average the model's predictions for MCH performance scores deviate from the actual observed scores by about 0.4764 units. This indicates a considerable level of precision in the model estimate, given the extent of variation detailed.

The implications of the results are clear: a holistic strategy that simultaneously integrates all phases of Participatory Monitoring and evaluation Process will lead to the most impactful thus predictable improvements in the Performance of MCH Programs.

An ANOVA of the Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

The study determines whether the predictive model is the best fitting model for projecting Participatory Monitoring and evaluation Process Performance of MCH Programs after use of Joint Gender Responsive Monitoring and evaluation Processes. The predictive ANOVA productivity numerical research findings are shown in Table 1.10.

Table 1.10: An ANOVA of the Joint Influence of Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	51.242	4	12.811	56.454	0.000[b]
	Residual	24.734	109	0.227		
	Total	75.976	113			

Predicted Variable: Performance of MCH Programs
Predictors: (Constant), Joint Participatory monitoring and evaluation Processes

An ANOVA (Analysis of Variance) was performed as an aspect of the numerous lined predictive analysis to determine if joint influence on Participatory Monitoring and Evaluation Process significantly explains variance in the Performance of MCH Programs.

ANOVA outcomes shows an overall predictive estimate is statistically substantial given

F-statistic: F (4,109) =56.454, Significance value: p=0.000.

Since p-value is 0.000 is far below the 0.05 critical level, the baseless hypothesis wasn't supported. This finding strongly suggests that the combined effect on four mechanisms of the Participatory Monitoring and evaluation Process significantly predicts the Performance of MCH Programs.

This analysis shows that the performance variability scores elucidated by the model (Explained variation = 51.242) is significantly larger than an unexplained variation (SSR = 24.734). This large difference, reflected in the high F-statistic, provides strong evidence that these participatory M&E variables collectively have a real impact. This leads to the conclusion that the model demonstrates a good performance and highly significantly captures data well.

Coefficients for the Regression of Joint Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

This study determines whether there was joint effect of Participatory Monitoring and Evaluation Process on Performance of MCH Programs. The regression Beta value outcomes are on Table 1.11.

Table 1.11: Coefficients for the Regression of Joint Participatory Monitoring and Evaluation Process and Performance of Maternal and Child Health Programs

	Coefficients				
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	T	Sig.

Constant	0.625	0.220		2.817	0.006	
Participatory M&E Planning in Child Health Programs	0.370	0.094	0.287	3.214		0.002
Participatory Monitoring and evaluation Data Collection in Child Health Programs	0.166	0.077	0.156	2.162		0.033
Participatory Monitoring and evaluation Data Analysis in Child Health Programs	0.223	0.081	0.205	2.750		0.007
Participatory Monitoring and evaluation Utilization Monitoring and evaluation Findings in Child Health Programs	0.429	0.185	0.437	2.325	0.022	

a. Dependent Variable: Performance of MCH Programs

The outcomes from Table 1.11 detail the exclusive contribution of each predictive factor—Participatory monitoring and evaluation Planning, Data Collection, Data Analysis, and Utilization

of Monitoring and evaluation Findings—to the Performance of MCH Programs, while holding the other variables constant. All four predictors are statistically significant (all $p<0.05$).

Order of Influence (Based on Standardized Beta (β)

The Standardized Coefficients (β) demonstrate the comparative magnitude of respective dimension unique contribution to this model:

Participatory M&E Utilization Findings (β=0.437): This is the most influential factor. Its high Beta value demonstrates that the actual use of data to inform decisions and policy provides the greatest direct, unique boost to MCH program performance.

Participatory M&E Planning (β=0.287): Establishing the participatory approach and M&E framework from the outset is the second most powerful unique contributor.

Participatory M&E Data Analysis (β=0.205): The analysis step has a substantial unique contribution, reinforcing its role as the bridge between raw data and actionable insights.

Participatory M&E Data Collection (β=0.156): The effort to secure high-quality data remains a significant, though slightly smaller, unique contributor when the influence of the other three variables is already accounted for.

The resultant multiple linear regression equation is:

Performance=0.625+0.220(Planning)+0.166(Collection)+0.223(Analysis)+0.429(Utilization)

Interpretation of Unstandardized Coefficients (B)

The unstandardized coefficients show the predicted change in MCH Program Performance for a single-unit increase in the regression, holding all other factors continual:

For each single-unit increase of Participatory Monitoring and evaluation Planning, the regression performance of MCH programs rise by 0.220 units (B=0.220, p=0.002).

A single-unit increase in Participatory Monitoring and evaluation Data Collection is linked with a

predicted enhancement of 0.166 units (B=0.166, p=0.033).

For each single-unit improvement in Participatory monitoring and evaluation Data Analysis, the performance is predicted to improve by 0.223 units (B=0.223, p=0.007).

A single-unit improvement in Participatory monitoring and evaluation Utilization of Monitoring and evaluation Findings is associated with a predicted improvement of 0.429 units (B=0.429, p=0.022).

Summary of Findings

This study conclusively illustrates the Joint Influence of the Participatory Monitoring and evaluation Process is a highly significant determinant of MCH Program Performance, accounting for 67.4% of the observed variation.

The findings highlight that while all four components are statistically necessary and positive, the Use of Monitoring and evaluation Findings is most powerful leverage point (β=0.437) for managers seeking to maximize performance. This suggests that resources should be strategically allocated not just to generating data, but specifically to ensuring that the resulting evidence is institutionally applied to policy and program adjustments to close the M&E feedback loop effectively.

CONCLUSIONS AND RECOMMENDATIONS

This section shows the summation of discoveries and final remarks. In the summary of findings, the outcomes for every proposal in the study is reported by the research purposes. The conclusions illustrated in this segment were guided by the research purposes and informed by the conclusions, appraisal, explanation and debates in the research.

Summary of Findings

This research objective is to study the Joint Influence of Participatory Monitoring and Evaluation Process on performance of MCH Programs. The summative mean and summative measure of variability for the combined influence Participatory Monitoring and Evaluation Process on

performance of MCH Programs were 3.89 and 0.980, respectively. Using the Likert measure, the respondents settled for these four factors jointly and positively impact the performance of MCH Programs. An overall perception of this combined influence is high and positive.

The overall correlation coefficient of determination for the Joint Influence of Participatory Monitoring and Assessment Process on performance of MCH Programs was found to be r=0.821 with p-value of 0.000<0.05. This shows that from the insights of the participants in the study, the outcomes indicated that there was a substantial mutual connection between the combined factors and the performance of MCH Programs. This led to the refusal of the baseless hypothesis (H0: There is absence of substantial connection between the Combined Impact of Participatory Monitoring and Evaluation Process on performance of MCH Programs and the acceptance of the back-up hypothesis. R^2 value of 0.674 indicates that approximately 61.6% of the variance in the performance of MCH Programs within Kenya can be elucidated by the combined impact of these four variables.

The ANOVA outcomes from the study participants' observations specified that the predicter model for the Combined Impact of Participatory Monitoring and Evaluation Process on performance of MCH Programs. was statistically substantial (F (4,109) =67.4 and p−value=0.000<0.05). This illustrates that this approach is decent, suitable for the statistics and that the influencing factors when considered together, are significant analysts of the measured factors.

The multiple proportional regression beta value conclusion showed that there was appropriate evidence that Participatory Monitoring and Evaluation Process mutually and significantly affect the performance of MCH Programs.

Conclusion

The research purpose was structured to analyze the intensity of the Joint Effect of Participatory Monitoring and Assessment Method on performance of MCH Programs. The Multiple proportional estimate coefficients as well as the Pearson relationship outcomes specified that there was a substantial combined effect of Participatory Monitoring and Evaluation Process on performance of MCH Programs. p-values implied that there was a substantial combined effect of these factors on the performance of MCH Programs

Recommendations

Future Research and Causal Pathway Investigation

Future findings should build upon these conclusions to investigate the causal pathways plus combined effects of these participatory variables within the complex health ecosystem of Nairobi County.

Areas for Further Research

Basing on the conclusions and contributions of this research that examined the impact of Participatory Monitoring and Evaluation approaches on the Productivity of MCH Programs in Nairobi City, the following are key suggestions for future research:

1. Contextual Replication and Generalizability of Findings

This research focused on a high-density, urban setting (Nairobi City), where resource availability and infrastructure are generally higher. Future studies should replicate this work in other diverse geographical and socio-economic settings in Kenya

2. The Role of Technology and Digital Platforms in PM&E

Given the study's reliance on virtual data collection (WhatsApp) and the increasing integration of technology in health systems, future research should assess how specific digital platforms and health information systems influence the participatory aspects studied here.

3. Examining Other Influential and Mediating Variables

This study focused on the four core PM&E processes. Future findings ought to empirically scrutinize other aspects that may facilitate or restrain the correlation between PM&E and MCH program performance.

4. Longitudinal Studies on Program Sustainability

This research provided a static analysis snapshot of the relationships between PM&E approaches

and MCH performance at one fact in a period. A future long-term study is necessary to track performance indicators over an extended period (e.g., 3–5 years)

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