

Research Article

Institutionalisation of Monitoring and Evaluation Systems and Programmatic Performance of Public Health NGOs in Nigeria: A Cross-sectional Analytical Study

Uebari Korfii^{1, 3, *} , Oluseyi Ajayi² , Oluwaseun Oluwasanmi¹ ,
Kabiru Abubakar Gulma⁴ , Rogers Bariture Kanee⁵ , Cassandra Akinde⁶ ,
Fegenuawura Excel Deeyor⁷, Precious Uahomo^{1, 8} , Zion Kuebari⁹

¹Department of Business Management, Miva Open University, Abuja, Nigeria

²Department of Marketing and Consumer Studies, University of Ibadan, Oyo, Nigeria

³Study Plus Hub LTD, Port Harcourt, Nigeria

⁴School of Global Health and Bioethics, Euclid University, Banjul, The Gambia

⁵African Centre of Excellence for Public Health and Toxicological Research, University of Port Harcourt, Port Harcourt, Nigeria

⁶Women in Global Health Nigeria, Abuja, Nigeria

⁷School of Public Health, University of Port Harcourt, Port Harcourt, Nigeria

⁸Frontiers Human Development Initiative (Frontiers HDI), Port Harcourt, Nigeria

⁹Premium Care Initiative, Asaba, Nigeria

Abstract

Background: This study examined the influence of M&E systems on the programmatic performance of public health NGOs in Nigeria, with the overall aim of assessing how the design, implementation, quality, and challenges of M&E systems impact organisational performance. Grounded in results-based management and performance measurement theory, the study conceptualizes M&E systems as managerial control mechanisms influencing organisational outputs and adaptive capacity. **Methods:** A quantitative research design was adopted using a structured questionnaire administered through Kobo Collect to 249 respondents drawn from national and international public health NGOs. Data were analysed for descriptive statistics and inferential analyses using SPSS version 27. **Results:** Results revealed that M&E systems are widely institutionalised within Nigerian NGOs, with 94% of organisations having dedicated M&E units and over 80% adopting structured logical frameworks or theories of change for program planning. The findings further established a strong positive relationship between M&E design and programmatic performance ($r = 0.747$, $p < 0.001$), confirming that effective M&E structures enhance program effectiveness. A moderate, significant correlation ($r = 0.608$, $p < 0.001$) was found between M&E quality and organisational performance. Multiple regression analysis showed that M&E design significantly predicted performance ($\beta = 0.61$, $p < 0.001$), explaining 55.8% of variance ($R^2 = 0.558$), while implementation challenges were not statistically significant predictors ($p = 0.054$). Regression results further showed that sex, organisational role, and NGO type significantly predicted perceived performance, with national NGOs and senior staff reporting lower ratings than international NGOs and operational staff. **Conclusions:** The study concluded that effective M&E systems serve as vital management tools that drive efficiency, innovation, and strategic

*Correspondence: Uebari Korfii (uebari.korfii@miva.edu.ng)

Received: 13 February 2026; **Accepted:** 27 February 2026; **Published:** 12 March 2026



Copyright: © The Author(s), 2026. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

learning within public health NGOs. It recommends strengthening technical capacity, aligning donor reporting frameworks with learning objectives, and leveraging digital technologies to enhance data quality and timeliness. The study contributes to knowledge by repositioning M&E from a donor compliance requirement to a strategic business management function essential for improving accountability, sustainability, and organisational performance in the Nigerian NGO sector.

Keywords

Monitoring and Evaluation Systems, Public Health NGOs, Organizational Performance

1. Introduction

Monitoring and Evaluation (M&E) systems are structured, systematic processes for collecting, analysing, and using data to track programme progress and assess outcomes. These systems are central to strengthening organisational accountability, supporting evidence-based decision-making, and promoting institutional learning within development and health interventions [1]. Within non-governmental organisations (NGOs), performance refers to the extent to which organisational objectives are achieved through effective service delivery and the attainment of intended public health outcomes [2]. Public health NGOs are non-profit entities engaged in health service provision, advocacy, and education, frequently complementing government-led initiatives [3]. The impact of M&E systems in this context reflects the measurable influence they exert on organisational effectiveness, efficiency, and overall performance in the delivery of health interventions [1].

In recent decades, Nigeria has experienced a substantial expansion in the number and influence of public health NGOs, driven by persistent health challenges such as HIV/AIDS, malaria, tuberculosis, maternal and child health burdens, and more recently, emerging public health threats including the COVID-19 pandemic [4]. These organisations play a pivotal role in complementing governmental efforts by delivering essential health services, mobilising communities, supporting policy implementation, and strengthening health systems, particularly in underserved and hard-to-reach populations. As the scope of NGO involvement has increased, organisational sustainability and effectiveness have become increasingly dependent on the ability to demonstrate measurable results, generate learning from implementation experiences, and utilise data to inform strategic and operational decisions. Comprehensive M&E systems are therefore indispensable, enabling organisations to monitor progress, evaluate impact, ensure accountability to donors and beneficiaries, and guide strategic planning processes [5, 6].

Globally, M&E has evolved into a core component of programme and organisational management. For public health NGOs operating in complex and resource-constrained environments such as Nigeria, M&E systems extend beyond routine reporting functions to serve as platforms for learning, adaptive management, resource optimisation, and stakeholder

engagement [7]. Effective M&E systems facilitate the articulation of clear objectives, systematic measurement of outcomes, and timely modification of interventions based on empirical evidence [1]. In parallel, donor agencies and funding partners increasingly emphasise results-based management and require implementing organisations to demonstrate strong performance measurement and accountability mechanisms. Consequently, the integration of M&E systems into programme design and implementation has become essential for maintaining organisational credibility and securing sustained financial support.

Despite the recognised importance of M&E systems, many public health NGOs in Nigeria continue to face significant challenges in their implementation and utilisation. Constraints such as limited technical capacity, inadequate financial resources dedicated to M&E activities, weak data management infrastructure, and inconsistent use of monitoring and evaluation findings persistently undermine effective programme management [8]. In some cases, M&E is perceived primarily as a donor-mandated compliance requirement rather than a strategic management function that supports learning and improvement. These limitations raise concerns regarding the extent to which investments in M&E systems translate into tangible improvements in programme effectiveness, efficiency, service coverage, and organisational learning outcomes.

The Nigerian health sector operates through a complex interplay of government, donor, and non-governmental actors, guided by national policy frameworks including the National Health Policy, the National Strategic Health Development Plan, and various disease-specific strategies [9, 10]. Within this pluralistic system, public health NGOs serve as critical implementing partners, particularly in marginalised communities where access to formal health services remains limited. As the scale and complexity of public health interventions continue to expand, the need for evidence-driven, adaptable, and high-performing NGOs has become increasingly pronounced.

Monitoring and evaluation systems are therefore central to the effective management and delivery of public health interventions in Nigeria. Public health NGOs frequently manage multiple donor-funded and time-bound projects, necessitating robust systems to track implementation progress, measure outcomes, identify operational challenges, and inform strategic

decision-making throughout the project life cycle [11]. High-quality M&E systems enable organisations to establish realistic targets, monitor performance against planned activities, assess intervention relevance and impact, and communicate results transparently to stakeholders [7]. Importantly, M&E systems also support adaptive management by allowing organisations to respond in real time to field-level data, beneficiary feedback, and changing contextual conditions, thereby enhancing service quality and responsiveness.

This study is anchored in Results-Based Management (RBM) theory and organisational performance measurement frameworks, which posit that structured monitoring systems enhance strategic alignment, accountability, and adaptive learning. Within this lens, M&E systems function not merely as reporting mechanisms but as internal governance tools that reduce information asymmetry, enhance managerial control, and improve allocative efficiency. Therefore, the institutionalization and quality of M&E systems are hypothesized to influence programmatic performance outcomes.

Nevertheless, persistent weaknesses in M&E financing, human resource capacity, data quality, and information systems continue to limit the effectiveness of M&E practices among many Nigerian public health NGOs [12]. Weak M&E systems can compromise programme design, implementation quality, timely identification of challenges, and the ability to demonstrate impact to donors and communities alike [13]. Conversely, strong and well-integrated M&E systems enhance organisational learning, strengthen accountability, improve programme outcomes, and support the replication and scaling of successful interventions [14]. Given these realities, there remains a critical need for empirical evidence examining the extent to which M&E systems influence the performance of public health NGOs in Nigeria. Assessing how M&E frameworks are designed, implemented, and utilised within these organisations is essential for identifying best practices, addressing existing gaps, and strengthening the overall effectiveness and sustainability of public health interventions in the Nigerian context.

Despite the increasing institutionalization of M&E systems among Nigerian NGOs, empirical evidence quantifying the magnitude and direction of their influence on programmatic performance remains limited. Existing studies have largely focused on project-level outcomes or donor compliance rather than organisational-level performance effects. This study addresses this gap by empirically testing the structural and quality dimensions of M&E systems against measurable performance indicators within public health NGOs.

2. Methods

2.1. Study Design

This study adopted a descriptive cross-sectional survey design. This design is considered appropriate because it enables the researcher to systematically collect data from a defined

population at a single point in time, thereby capturing existing practices, perceptions, and outcomes associated with M&E implementation across various organisations [15, 16]. The descriptive approach allows for a detailed examination of the relationship between M&E system characteristics, such as data collection, reporting practices, and feedback mechanisms, and indicators of organisational performance, including program efficiency, service delivery quality, and donor satisfaction [17].

A cross-sectional design is particularly suited to this research given the diversity of NGOs in Nigeria's public health sector, both in terms of geographical location and operational capacity [2]. It also enables the analysis of variations in M&E practices across different types of organisations, such as those focused on HIV/AIDS, malaria, maternal health, and immunisation. This study design enables data-driven insights and evidence-based recommendations for improving performance through more effective monitoring and evaluation strategies.

2.2. Study Population

The research population for this study comprised all registered public health NGOs operating in Nigeria that implement health-related interventions and utilise M&E systems. According to the Nigeria Network of NGOs (NNNGO) [18], many public health organisations operate in Nigeria. These organisations included both international and indigenous NGOs engaged in diverse public health programs such as maternal and child health, HIV/AIDS prevention and treatment, malaria control, immunisation, health system strengthening, and community health outreach. The selection of this population was based on the relevance of their work to national health outcomes and their reliance on M&E systems for tracking performance, ensuring accountability, and guiding programmatic decisions.

Given Nigeria's size and diversity, the study focused on public health NGOs operating across the 36 states, representing different geopolitical zones to ensure regional representation and broader applicability of findings. These NGOs typically vary in scale, scope, funding sources, and internal M&E capacity. The population included program officers, M&E specialists, project managers, and senior management staff with direct knowledge of their organisation's monitoring, evaluation, and reporting processes.

2.3. Sample and Sampling Technique

The sample for this study comprised staff members of selected public health NGOs operating in Nigeria, specifically those involved in program implementation, M&E, and management functions. These individuals were targeted due to their direct involvement in the planning, execution, and evaluation of public health interventions, making them well-positioned to provide informed insights into how M&E systems influence organisational performance. Given the wide distribution and diversity

of public health NGOs across Nigeria, a multi-stage sampling technique was adopted to ensure representativeness while maintaining feasibility.

In the first stage, a list of registered public health NGOs was compiled from NNNGO. From this list, simple random sampling was employed to select a fixed number of NGOs. Finally, within each selected NGO, stratified random sampling was applied to ensure that respondents included program officers, M&E personnel, and senior managers, thus capturing a broad spectrum of perspectives. This approach ensured diversity in experience, roles, and institutional contexts, increasing the generalisability and validity of the findings.

2.4. Sample Size Determination

The sample size for this research was determined using Yamane's formula [19], which is widely used in social science research to calculate sample size from a known population, particularly when resources and time are limited. The formula is expressed as:

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

Where:

- 1) n = sample size
- 2) N = total population size (3,500) employees from the selected NGOs
- 3) e = margin of error (typically set at 0.05 for 95% confidence level)

The formula was applied with a 5% margin of error:

$$n = 3500 / (1 + 3,500(0.05)^2) = 3,500 / (1 + 3,500(0.0025)) = 3,500 / (1 + 8.75) = 3,500 / 9.75 \approx 359$$

Thus, a minimum sample size of 359 respondents was deemed sufficient to ensure representativeness and statistical reliability. The sample was proportionally distributed across the selected NGOs, ensuring that the perspectives of both program staff and M&E personnel were adequately captured. This method provided a balance between precision, cost-effectiveness, and feasibility for effective data collection and analysis. Although Yamane's formula yielded a required sample size of 359, 249 valid responses were obtained (69.4% response rate). A post-hoc power analysis indicates that the achieved sample size retains sufficient statistical power (>0.80) to detect medium to large effect sizes in regression analysis.

2.5. Method of Data Collection

The method of data collection for this study involved a structured and systematic approach to ensure the reliability, validity, and relevance of the information gathered. Primary data were collected through the administration of Kobo Collect structured questionnaire. The questionnaire was designed to capture quantitative responses from staff members directly involved in M&E processes, program implementation, and performance evaluation within selected public health NGOs [1, 20]. The instrument focused on areas such as the existence and functionality of M&E systems, data use practices, staff

capacity, stakeholder participation, and performance outcomes.

2.5.1. Study Instrument

The primary research instrument used for this study was a structured quantitative questionnaire designed to collect data from staff of public health NGOs in Nigeria. The questionnaire was developed to capture a broad range of information relevant to understanding how M&E systems function within these organisations and how they relate to performance outcomes. It was organised into five major sections to ensure comprehensive coverage of key thematic areas.

The first section gathered sociodemographic information on the respondents and their organisations, including job roles, years of experience, size of the organisation, type of services offered, and geographical coverage. This demographic data provided the necessary context for interpreting patterns and relationships in the responses. The subsequent sections featured closed-ended questions measured on a five-point Likert scale ranging from "strongly disagree" to "strongly agree," aimed at capturing perceptions on the structure, effectiveness, and use of M&E systems. Questions that were covered were such as the availability and use of M&E frameworks, tools, and personnel; the extent of stakeholder participation; the integration of data into program planning and decision-making; and the contribution of M&E to accountability, transparency, performance, and learning. The instrument was designed to be self-administered and straightforward, ensuring clarity and reducing response bias. Before full-scale deployment, the questionnaire underwent expert review to ensure content validity, and a pilot test was conducted to refine item clarity and consistency. The quantitative nature of the instrument allowed for systematic data collection across a large sample of NGO staff, enabling statistical analysis of trends and correlations. The use of standardised response formats also facilitated data comparability and supported the application of descriptive and inferential statistical methods for hypothesis testing and result interpretation.

2.5.2. Administration of Instrument

The administration of the research instrument for this study was conducted exclusively through Kobo Collect, an online survey platform that facilitates efficient, wide-reaching, and cost-effective data collection. Given the geographical spread of public health NGOs in Nigeria and the logistical challenges of face-to-face data collection, Kobo Collect provided a practical alternative for reaching a diverse sample across multiple states.

The structured questionnaire was digitised and shared via email and WhatsApp with targeted respondents, including program officers, M&E staff, and other relevant personnel working in public health NGOs. A brief introductory message accompanied the form, clearly explaining the purpose of the study, assuring respondents of confidentiality, and emphasizing the voluntary nature of participation. To enhance response

rates, follow-up reminders were sent periodically, and respondents were given sufficient time, typically two to three weeks, to complete the questionnaire at their convenience. The online form was designed with user-friendly formatting, including required response fields to minimise missing data and logic branching to improve flow and relevance. The digital format also allowed real-time monitoring of response submissions and automated data capture, ensuring accuracy and eliminating the need for manual data entry. This method significantly improved data management and facilitated a seamless transition into the analysis phase.

2.5.3. Pilot Study

Prior to the full-scale data collection for this study, a pilot study was conducted to test the effectiveness, clarity, reliability, and validity of the research instrument. The pilot study served as a crucial preparatory phase, enabling the researcher to identify potential issues with the questionnaire and refine it before administering it to the larger target population.

The pilot study was conducted among community-based organisations (CBOs) operating within the public health sector in selected local government areas. CBOs were considered suitable for piloting because they represent a grassroots tier of NGOs and often share similar M&E challenges and practices with larger public health NGOs. A total of 40 respondents from five CBOs were selected for the pilot, including M&E officers, program staff, and coordinators who actively engage in data collection, reporting, and project monitoring. These respondents were chosen using a purposive sampling technique, ensuring that only individuals with relevant knowledge and experience in M&E are included.

The research instrument was administered using Kobo Collect, and a consent form was embedded at the beginning of the questionnaire to ensure ethical compliance. Respondents were given five days to complete the form, and follow-up reminders were sent to encourage participation. Upon completion, the responses were analysed to evaluate the clarity of the questions, the time taken to complete the survey, and the reliability of the scales used. Feedback from respondents was collected through follow-up phone calls and emails to understand any difficulties they faced while completing the questionnaire. The pilot data were subject to preliminary statistical analysis to assess the reliability of the instrument. Using Cronbach's alpha of 0.795, internal consistency was tested across various sections of the questionnaire.

2.5.4. Method of Data Analysis

The analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software version 27. Descriptive statistics were employed to summarise the general characteristics of the respondents and their organisations. These included frequencies, percentages, means, and standard deviations. To test the study's hypotheses and examine relationships between variables, inferential statistics was applied. Specifically, Pearson's correlation analysis was used to assess

the strength and direction of the relationships between key variables, such as the quality of M&E practices and organisational performance outcomes. In addition, linear regression analysis was conducted to determine the predictive power of independent variables (such as the presence of functional M&E units, stakeholder participation, and data use practices) on dependent variables like programmatic performance and organisational learning capacity [21]. Tests of statistical significance was set at a 95% confidence level ($p < 0.05$) to ensure the reliability of the inferences drawn from the data. Where applicable, cross-tabulations and ANOVA test was utilised to explore variations in M&E practices and outcomes across different types of NGOs or geographical locations. Harman's single-factor test was conducted to assess potential common method variance. The first factor accounted for less than 50% of the total variance, indicating that common method bias is unlikely to influence the findings significantly.

2.5.5. Ethical Considerations

This study adhered strictly to ethical standards in line with the research guidelines of Miva Open University and broader research ethics principles. Prior to the commencement of data collection, ethical clearance was sought and obtained from the Miva Open University Research Ethics Committee, ensuring that the study meets all requirements for the protection of human participants. To ensure informed consent, a consent form was embedded at the beginning of the Kobo Collect questionnaire. This section provided a detailed explanation of the study's purpose, the role of participants, the estimated time commitment, and any potential risks or benefits associated with participation. It also clarified that participation is entirely voluntary and that respondents could withdraw from the study at any point without any negative consequences. Only participants who clicked "I agree" on the consent form were able to proceed with completing the questionnaire, thereby ensuring that consent is both informed and documented. Confidentiality was strictly maintained throughout the research process. No personally identifiable information (e.g., names, emails, or organisational identities) was collected, unless voluntarily disclosed. Data was stored in a secure, password-protected digital environment accessible only to the researcher and supervisory team.

3. Results

Response Rate

Formula:

$$\text{Response Rate (\%)} = (\text{Actual Responses} / \text{Expected Sample Size}) \times 100$$

Given:

Expected sample size = 359

Actual responses = 249

Calculation:

$$(249 / 359) \times 100 = 0.6936 \times 100 = 69.36\%$$

Response Rate = 69.36%

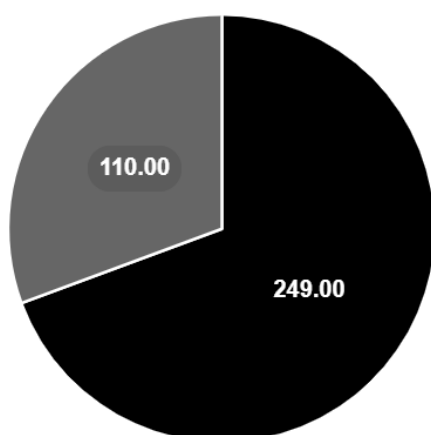


Figure 1. Distribution of Respondents and Non-Respondents.

A total of 249 completed questionnaires were returned out of an expected sample of 359 respondents, yielding a response rate of 69.4% (Figure 1). This response rate is considered adequate for survey-based studies in public health and organisational research and provides sufficient statistical power for analysis.

Table 1. Socio-Demographic and Organizational Characteristics of Respondents.

Variable	Frequency	Percentage
Sex		
Male	117	47.0
Female	132	53.0
Age		
18-24	4	1.6
25-34	139	55.8
35-44	93	37.3
45-54	12	4.8
55-64	1	0.4
Highest Educational Qualification		
Bachelor's degree	148	59.4
Diploma	28	11.2
Doctorate (PhD)	9	3.6
Master's degree	64	25.7
Position/Role		
Director	9	3.6
Finance/Administration Staff	3	1.2

Variable	Frequency	Percentage
M&E Associate	85	34.1
Manager	34	13.7
Program Analyst	32	12.9
Program Associate	86	34.5
Years of Work Experience in Public Health NGO Sector		
1-3 years	70	28.1
4-6 years	123	49.4
7-10 years	32	12.9
Less than 1 year	4	1.6
More than 10 years	20	8.0
Length of Service in Current NGO		
1-3 years	116	46.6
4-6 years	103	41.4
7-10 years	13	5.2
Less than 1 year	10	4.0
More than 10 years	7	2.8
Type of NGO		
International	93	37.3
National	156	62.7

The socio-demographic characteristics of respondents (Table 1) revealed a balanced representation of gender, with females (53.0%) slightly outnumbering males (47.0%). The age distribution indicates that most respondents (55.8%) were between 25–34 years, followed by 37.3% aged 35–44 years, showing that the workforce in public health NGOs is predominantly young and middle-aged. In terms of educational qualification, the majority held a bachelor's degree (59.4%), while 25.7% had master's degrees, suggesting a well-educated workforce. Regarding job roles, M&E Associates (34.1%) and Program Associates (34.5%) accounted for most respondents, reflecting the operational and technical focus of NGO staff. Nearly half (49.4%) had 4–6 years of experience in the public health NGO sector, and 46.6% had served in their current organisation for 1–3 years, implying moderate professional experience and moderate staff retention rates. Only a small proportion (8.0%) had over 10 years of experience. In terms of organisational type, 62.7% of respondents worked in national NGOs, while 37.3% were from international NGOs, highlighting the stronger presence of national organisations in the dataset.

Table 2. Respondents' Perception of the Influence of Monitoring and Evaluation Systems on Program Effectiveness, Decision-Making, and Organisational Sustainability.

Influence of M&E Systems on Programmatic Performance		
M&E findings inform programmatic decisions	Frequency	Percentages (%)
Strongly Agree	129	51.8
Agree	98	39.4
Neutral	6	2.4
Strongly Disagree	12	4.8
Disagree	4	1.6
M&E improved program effectiveness		
Strongly Agree	134	53.8
Agree	84	33.7
Neutral	13	5.2
Strongly Disagree	15	6.0
Disagree	3	1.2
M&E data guide resource allocation decisions in my organisation		
Strongly Agree	91	36.5
Agree	116	46.6
Neutral	23	9.2
Strongly Disagree	15	6.0
Disagree	4	1.6
M&E findings are regularly shared with staff, partners, and stakeholders to improve accountability		
Strongly Agree	114	45.8
Agree	106	42.6
Neutral	13	5.2
Strongly Disagree	13	5.2
Disagree	3	1.2
Design and Implementation of M&E Systems		
My organisation uses a structured logical framework (logframe) or theory of change for project planning		
Strongly Agree	69	27.7
Agree	135	54.2
Neutral	33	13.3
Strongly Disagree	5	2.0
Disagree	7	2.8
Indicators for measuring inputs, outputs, outcomes, and impacts are clearly defined		
Strongly Agree	111	44.6
Agree	108	43.4
Neutral	17	6.8
Strongly Disagree	6	2.4
Disagree	7	2.8

Influence of M&E Systems on Programmatic Performance

My organisation has dedicated staff or units responsible for M&E

Yes	234	94.0
No	15	6.0

There are periodic reviews (e.g., quarterly/annual) to assess the effectiveness of program implementation through M&E data

Strongly Agree	125	50.2
Agree	100	40.2
Neutral	5	2.0
Strongly Disagree	12	4.8
Disagree	7	2.8

M&E systems are integrated into overall organisational strategy

Strongly Agree	93	37.3
Agree	130	52.2
Neutral	12	4.8
Strongly Disagree	8	3.2
Disagree	6	2.4

Challenges in the Utilisation of M&E Systems

Challenges organisation face in implementing M&E systems

	Frequency	Percentages (%)
Inadequate data quality	39	15.7
Insufficient funding/resources	87	34.9
Limited technical expertise in M&E	56	22.5
Low stakeholder buy-in	45	18.1
Weak institutional support	22	8.8

The challenges listed above significantly limit the use of M&E data in decision-making

Strongly Agree	27	10.8
Agree	134	53.8
Neutral	55	22.1
Strongly Disagree	7	2.8
Disagree	26	10.4

Donor requirements (e.g., rigid reporting formats) hinder flexible and effective use of M&E data

Strongly Agree	15	6.0
Agree	99	39.8
Neutral	65	26.1
Strongly Disagree	9	3.6
Disagree	61	24.5

Quality of M&E Practices, Organisational Sustainability and Learning

High-quality M&E practices have helped build resilience and sustainability in my organisation

	Frequency	Percentages (%)
Strongly Agree	93	37.3
Agree	126	50.6
Neutral	21	8.4

Influence of M&E Systems on Programmatic Performance		
Strongly Disagree	5	2.0
Disagree	4	1.6
M&E processes in my organisation promote a culture of learning and adaptive management		
Strongly Agree	85	34.1
Agree	145	58.2
Neutral	12	4.8
Strongly Disagree	1	0.4
Disagree	6	2.4
Staff are trained and engaged in learning activities based on M&E results		
Strongly Agree	73	29.3
Agree	121	48.6
Neutral	36	14.5
Strongly Disagree	6	2.4
Disagree	13	5.2
The use of M&E results has enhanced stakeholder satisfaction and long-term partnerships		
Strongly Agree	67	26.9
Agree	151	60.6
Neutral	22	8.8
Strongly Disagree	5	2.0
Disagree	4	1.6
M&E drive continuous improvement and ensure organisational sustainability		
Strongly Agree	111	44.6
Agree	126	50.6
Neutral	8	3.2
Strongly Disagree	1	0.4
Disagree	3	1.2
Overall Performance of Public Health NGOs		
Performance of Public Health NGOs	Frequency	Percentages (%)
Good performance	242	97.2
Poor performance	7	2.8

The findings indicate that M&E systems have a strong positive influence on the programmatic performance of public health NGOs in Nigeria. A majority of respondents strongly agreed (51.8%) or agreed (39.4%) that M&E findings inform programmatic decisions, while 87.5% affirmed that M&E has improved program effectiveness. Similarly, 83.1% agreed that M&E data guide resource allocation decisions, and 88.4% reported that findings are regularly shared with staff and partners to improve accountability. Regarding M&E system design and implementation, 81.9% agreed that their organisations use a structured logical

framework or theory of change, and 88% reported that indicators for inputs, outputs, and outcomes are clearly defined. Nearly all respondents (94%) indicated that their organisations have dedicated M&E units, reflecting strong institutionalisation of M&E functions. However, the most cited challenges included insufficient funding (34.9%), limited technical expertise (22.5%), and low stakeholder buy-in (18.1%). Despite these constraints, most respondents agreed that high-quality M&E practices enhance organisational sustainability (87.9%), promote a culture of learning (92.3%), and strengthen stakeholder partnerships

(87.5%). Overall, 97.2% of respondents rated their organisational performance as good, underscoring the positive contribution of effective M&E systems to accountability, learning,

and programmatic success within public health NGOs (Table 2).

Table 3. Summary of Tests of Research Hypotheses on M&E Systems and Programmatic Performance ($n = 249$).

Hypothesis	Statistical Test	Variables Tested	Test Statistics	Sig. (p-value)	Decision on H_0	Interpretation
H ₁ : There is no significant relationship between the influence of M&E Systems on performance and design, and the implementation of M&E Systems	Pearson Correlation	M&E Design × M&E Influence on Programmatic Performance	$r = 0.747$	0.001	Reject H_0	Strong, positive, and significant relationship between M&E effectiveness and performance
H ₂ : There is no significant effect of M&E implementation challenges on the quality of M&E practices among public health NGOs in Nigeria	Pearson Correlation	M&E Challenges × M&E Quality	$r = -0.090$	0.159	Fail to Reject H_0	Weak, negative, and non-significant relationship; challenges do not significantly affect M&E quality
H ₃ : Challenges in M&E implementation do not significantly hinder the performance of public health NGOs in Nigeria	Simple Linear Regression	M&E Challenges → Programmatic Performance	$r = 0.122$	0.054	Fail to Reject H_0	Negative but non-significant effect; challenges did not significantly hinder performance
H ₄ : The quality of M&E practices is not significantly associated with the organisational sustainability and learning capacity of public health NGOs in Nigeria	Pearson Correlation	M&E Quality × Programmatic Performance	$r = 0.608$	0.001	Reject H_0	Moderate, positive, and significant relationship between M&E quality and performance

The results of the hypothesis testing revealed varying degrees of association between M&E systems and programmatic performance among public health NGOs in Nigeria. For Hypothesis 1, the Pearson correlation showed a strong, positive, and statistically significant relationship ($r = 0.747$, $p = 0.001$), indicating that effective M&E system design and implementation are closely linked with improved programmatic performance. In contrast, Hypothesis 2 found a weak, negative, and non-significant correlation ($r = -0.090$, $p = 0.159$) between M&E challenges and the quality of M&E practices, suggesting that challenges faced by organisations do not substantially affect the overall quality of their M&E systems. Hypothesis 3,

which tested the effect of M&E challenges on performance through regression analysis, also produced a non-significant result ($r = 0.122$, $p = 0.054$), implying that while challenges exist, they do not significantly hinder performance outcomes. However, Hypothesis 4 demonstrated a moderate, positive, and significant relationship between M&E quality and programmatic performance ($r = 0.608$, $p = 0.001$), indicating that higher-quality M&E practices enhance organisational learning and sustainability (Table 3). These findings highlight that while M&E quality and effectiveness are key drivers of performance, implementation challenges exert minimal measurable influence on organisational outcomes.

Table 4. Association between Sociodemographic Characteristics and Programmatic Performance of Public Health NGOs ($n = 249$).

Predictor Variables	B	Std. Error	Beta	t	Sig. (p-value)	Interpretation
Sex	0.048	0.021	0.144	2.309	0.022	Significant, males reported slightly higher performance
Position/Role	-0.026	0.007	-0.230	-3.567	0.001	Significant, higher roles are linked to lower performance perception

Predictor Variables	B	Std. Error	Beta	t	Sig. (p-value)	Interpretation
Type of NGO	-0.047	0.022	-0.137	-2.143	0.033	Significant, national NGOs rated lower performance than international NGOs
Age	-0.024	0.018	-0.092	-1.322	0.188	Not significant
Marital Status	-0.014	0.018	-0.050	-0.753	0.452	Not significant
Highest Educational Qualification	-0.008	0.009	-0.064	-0.946	0.345	Not significant
Years of Work Experience in the Public Health NGO Sector	-0.009	0.012	-0.056	-0.703	0.482	Not significant
Length of Service in Current NGO	0.019	0.013	0.106	1.460	0.146	Not significant

The regression analysis (Table 4) examined the influence of sociodemographic characteristics on the programmatic performance of public health NGOs. The model revealed that three predictors—sex, position or role, and type of NGO had statistically significant effects on performance. Sex was a positive and significant predictor ($\beta = 0.144$, $p = 0.022$), indicating that male respondents reported slightly higher levels of programmatic performance than their female counterparts. Position or role showed a negative and significant relationship ($\beta = -0.230$, $p = 0.001$), suggesting that respondents in higher managerial roles tended to rate organisational performance lower than those in technical or operational positions. The type of NGO also had a significant effect ($\beta = -0.137$, $p = 0.033$), with respondents from national NGOs reporting lower performance ratings compared to those from international organisations. However, age, marital status, educational qualification, years of experience, and length of service did not significantly influence performance, as their p -values exceeded 0.05. This implies that personal background factors have limited predictive power on programmatic outcomes. Overall, the results suggest that organisational context and role-related dynamics exert more influence on perceived programmatic performance than individual demographic characteristics among employees of public health NGOs in Nigeria.

4. Discussion

The response rate of 69.4% obtained in this study (249 of 359 participants) is considered satisfactory for survey-based research and aligns with acceptable thresholds in public health and organisational studies. According to Adebayo & Olofin [22], response rates above 60% are generally deemed adequate to ensure representativeness and reliability in evaluating NGO performance. Similarly, Akinyemi & Adejumo [23] reported a comparable response rate in their study of M&E systems in Nigerian NGOs, emphasizing that active engagement of participants often

reflects organisational commitment to accountability and learning. In contrast, studies such as Kananura et al. [24] in Uganda and Agyapong et al. [25] in Ghana reported slightly higher response rates (around 75–80%), attributing their success to strong participatory M&E frameworks that enhance stakeholder buy-in. Nonetheless, the current study's 69.4% rate remains within acceptable limits and suggests substantial respondent participation. The 30.6% non-response rate may be linked to data collection challenges, issues consistent with findings by Bello & Ekong [26], who noted similar barriers in Nigerian public health projects. The response rate provides a solid foundation for valid data analysis and reflects meaningful engagement from NGO personnel across different organisational levels. This study examined how M&E systems relate to programmatic performance in public-health NGOs in Nigeria, how those systems are designed and implemented, the principal barriers to effective use of M&E for decision-making and accountability, and the relationship between M&E quality and organisational sustainability and learning. The respondent sample was largely young-to-mid-career, well educated, and heavily represented by operational M&E and program staff features that strengthen the credibility of measured perceptions of M&E practice. Results indicate strong, positive associations between M&E design/implementation and program performance, a clear institutionalisation of M&E functions in many organisations, persistent resource and capacity constraints, and a substantive positive link between M&E quality and organisational learning and sustainability. The data show a strong, positive relationship between M&E design/implementation and programmatic performance ($r = 0.747$, $p < 0.001$). Respondents overwhelmingly reported that M&E findings inform programmatic decisions, improve program effectiveness, guide resource allocation and are routinely shared to promote accountability (Table 4).

These quantitative results mirror qualitative and mixed-methods findings in the literature that well-designed M&E systems, especially those built around the theory of

change/logframes, clear indicators and routine reviews support evidence-based decision-making and improved program outcomes [24, 27, 28]. Where dashboards and digital feedback loops are present, organisations report faster learning cycles and more effective resource targeting [29, 30]. The current study's results are therefore consistent with international evidence that systematic M&E is a core driver of program effectiveness.

From a business-management perspective, M&E functions as both a performance measurement and a managerial control mechanism [31, 32]. By converting field activity into reliable indicators, M&E allows NGO managers to apply management-by-objectives (MBO) logic set targets, monitor progress, and adjust resources thereby improving operational efficiency [33]. The high proportion of NGOs using logframes/theory of change (over 80% agreement) and defined indicators (~88% agreement) suggests that many organisations have the basic architecture necessary for translating monitoring data into managerial action. This institutional architecture likely explains the near-universal high self-rated organisational performance (97.2% good), though social desirability and respondent bias should be acknowledged.

Section C shows that most organisations report structured M&E design: logframes/theory of change usage, defined indicators, periodic reviews, integration into organisational strategy, and dedicated M&E staff (94% reported dedicated M&E units). This level of institutionalisation aligns with best practice guidelines and with the findings of Kusek & Rist [27], Breuer et al. [28] and Robertson & Sawadogo-Lewis [34]. It also resonates with studies in Nigeria showing increasing formalisation of M&E roles and the adoption of learning cultures in well-resourced NGOs [35, 36]. However, the presence of structures does not guarantee high-quality practice: the study found both high institutionalisation and substantive reports of recurring challenges (funding, technical capacity, stakeholder buy-in). This mixed picture fits the literature: implementation fidelity often lags behind design due to resource constraints and capacity gaps [37, 38]. From a management viewpoint, a logframe or M&E unit creates potential for improved decision-making, but value is realised only when data quality, timely reporting, and decision processes are aligned, echoing the concept of alignment in performance management [39].

Respondents ranked insufficient funding (34.9%), limited technical expertise (22.5%), and low stakeholder buy-in (18.1%) as top constraints. Over half agreed that these challenges significantly limit the use of M&E in decision-making. This is consistent with empirical studies from Nigeria and other African contexts showing funding dependency, donor reporting burdens, and skill shortages as persistent barriers [36, 40, 41]. Donor-driven reporting requirements were highlighted by many respondents as inhibiting flexibility (only 6% strongly agreed donors do not hinder), which aligns with global critiques regarding reporting fragmentation and misalignment between donor metrics and organisational learning needs [34].

Despite these challenges, regression analyses found that reported M&E challenges did not significantly hinder programmatic performance at conventional levels (regression $p = 0.054$; correlation between challenges and quality $r = -0.090$, $p = 0.159$). Two interpretations are plausible. First, many NGOs may have compensatory mechanisms (e.g., committed staff, external technical support, or donor technical assistance) that mitigate the measurable impact of M&E challenges on overall program performance, so challenges reduce efficiency but do not catastrophically impair outcomes. Second, the survey's self-reported performance measure may be relatively insensitive to marginal declines in quality or subject to optimism bias, underestimating the real effect of constraints. Comparable studies have found similar nuance: challenges degrade process quality, but their effect on headline program outcomes may be buffered by external resources or by the project life-cycle stage [42]. From a business management lens, constrained M&E resourcing undermines the capacity for fine-grained managerial control, limiting timely reallocation of inputs and adaptive management, thereby increasing costs and reducing scalability [32, 43].

The positive and statistically significant correlation between M&E quality and programmatic performance ($r = 0.608$, $p < 0.001$) demonstrates that where quality is high, defined by staff training, data reliability, feedback processes and integration, organisations report stronger learning, resilience and stakeholder satisfaction. This corroborates literature emphasizing M&E's role in organisational learning, adaptive management, and sustainability [27, 28, 35]. Studies in similar settings have linked robust MEAL (monitoring, evaluation, accountability and learning) systems to sustained donor relationships and program continuation beyond funding cycles [40, 44]. In business management terms, high-quality M&E fosters dynamic capabilities organisations that learn faster adapt their resource base and routines, generating sustainable competitive (or programmatic) advantage [43]. High-quality M&E supports continuous improvement and reduces uncertainty in decision-making, improving both operational efficiency and strategic positioning [29, 32]. Regression analysis showed that sex, position/role, and type of NGO significantly predicted perceived performance: males reported slightly higher performance ($\beta = 0.144$, $p = 0.022$); higher roles tended to rate performance lower ($\beta = -0.230$, $p = 0.001$); and national NGOs rated performance lower than international NGOs ($\beta = -0.137$, $p = 0.033$). Other demographics (age, education, experience) were not significant. The finding that managers/directors may rate performance lower than operational staff can reflect greater awareness of systemic constraints among senior staff, a pattern noted elsewhere where leaders see strategic gaps not evident to frontline staff [22, 39]. The type of NGO effect likely reflects differences in capacity, external support and systems maturity: international NGOs commonly have more resources and standardized global MEAL practices [2, 30]. For business management, these differences matter: leader-

ship perceptions influence strategic priorities and resource allocation. If senior managers perceive lower performance, they are more likely to invest in systemic fixes, including M&E strengthening whereas frontline optimism may create complacency.

5. Limitations of the Study

This study has several limitations that should be considered when interpreting the findings. Data were derived from self-reported responses of NGO staff, which may be subject to response bias and social desirability effects, potentially leading to overestimation of M&E system effectiveness and organisational performance. The cross-sectional study design further limits causal inference, as observed relationships do not confirm whether robust M&E systems lead to improved performance or whether high-performing organisations are more likely to invest in M&E. In addition, the sample was drawn from a subset of public health NGOs, which may not fully capture the heterogeneity of NGOs operating across different regions and programmatic areas in Nigeria. Some analytical procedures were also affected by unequal subgroup sizes, which may have reduced statistical power. The reliance on perceptual performance measures rather than objective performance indicators may inflate positive associations due to self-report bias. Finally, the exclusive reliance on quantitative data limited the exploration of contextual and organisational factors shaping M&E practices. Future studies should adopt longitudinal and mixed-methods approaches to provide deeper insights into causal pathways and contextual dynamics influencing M&E system effectiveness.

6. Conclusions

This study demonstrated that monitoring and evaluation (M&E) systems are critical to improving the programmatic performance, accountability, and sustainability of public health NGOs in Nigeria. Well-structured M&E systems characterized by clear frameworks, measurable indicators, dedicated units, and regular reviews were strongly associated with enhanced program effectiveness, evidence-based decision-making, and efficient resource allocation. NGOs that integrated M&E into organisational strategy reported better outcomes, stronger stakeholder confidence, and improved adaptive learning. High-quality M&E practices also promoted organisational resilience, continuous improvement, and long-term sustainability. Although funding constraints, technical capacity gaps, and limited stakeholder engagement were common challenges, these factors did not significantly weaken the relationship between M&E and performance, suggesting that adaptive management practices mitigate their effects. Variations in performance perceptions across roles and NGO types highlight the need for targeted capacity-building interventions.

Overall, M&E systems should be repositioned from compliance tools to strategic management assets. The study recommends strengthening national M&E capacity frameworks, digital systems, and cross-sector collaboration to enhance data quality, utilisation, and health programme effectiveness.

Abbreviations

M&E	Monitoring and Evaluation
NGOs	Non-Governmental Organisations
LMICs	Low- and Middle-Income Countries
MEAL	Monitoring, Evaluation, Accountability, and Learning
PHC	Primary Health Care
UHC	Universal Health Coverage
WHO	World Health Organization
NNNGO	Nigeria Network of Non-Governmental Organisations
SPSS	Statistical Package for the Social Sciences
MBO	Management by Objectives
KPI	Key Performance Indicator
SDGs	Sustainable Development Goals
ToC	Theory of Change
CBO	Community-Based Organisation

Acknowledgments

The authors gratefully acknowledge the management of Miva Open University, Abuja, Nigeria, for the institutional support and academic environment that facilitated the successful conduct of this study.

Author Contributions

Uebari Korfii: Conceptualization, Project administration, Methodology, Formal Analysis, Data curation, Visualization, Writing – original draft

Oluseyi Ajayi: Supervision, Validation, Methodology, Writing – review & editing

Oluwaseun Oluwasanmi: Supervision, Writing – review & editing

Kabiru Abubakar Gulma: Writing – review & editing

Rogers Bariture Kanee: Writing – review & editing

Cassandra Akinde: Writing – review & editing

Fegenuawura Excel Deeyor: Writing – review & editing

Precious Uahomo: Writing – review & editing

Zion Kuebari: Writing – review & editing

Data Availability Statement

The datasets generated and/or analysed during the current study are available on request from the corresponding author.

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Bbosa, S., Edaku, C., & Kiyangi, F. (2023). The influence of monitoring and evaluation methods on the performance of Uganda Red Cross Society in Eastern Uganda. *Open Journal of Social Sciences*, 11, 208–227. <https://doi.org/10.4236/jss.2023.117015>
- [2] Doshmangir, L., Sanadghol, A., Kakemam, E., & Majdzadeh, R. (2025). The involvement of non-governmental organisations in achieving health system goals based on the WHO six building blocks. *PLOS ONE*, 20(1), e0315592. <https://doi.org/10.1371/journal.pone.0315592>
- [3] Besançon, S., Sidibé, A., Sow, D. S., Sy, O., Ambard, J., Yudkin, J. S., & Beran, D. (2022). The role of non-governmental organizations in strengthening healthcare systems in low- and middle-income countries. *Global Health Action*, 15(1), 2061239. <https://doi.org/10.1080/16549716.2022.2061239>
- [4] Abubakar, I., Dalglish, S. L., Angell, B., et al. (2022). The Lancet Nigeria Commission: Investing in health and the future of the nation. *The Lancet*, 399(10330), 1155–1200. [https://doi.org/10.1016/S0140-6736\(21\)02488-0](https://doi.org/10.1016/S0140-6736(21)02488-0)
- [5] Rendell, N., Lokuge, K., Rosewell, A., & Field, E. (2020). Factors that influence data use to improve health service delivery in low- and middle-income countries. *Global Health: Science and Practice*, 8(3), 566–581. <https://doi.org/10.9745/GHSP-D-19-00388>
- [6] Nshimiyimana, B., & Rabie, B. (2024). Assessment of the results-based monitoring and evaluation policy frameworks in Namibia. *Administratio Publica*, 32(1), 127–151.
- [7] De Cola, M. A., Chestnutt, E. G., Richardson, S., et al. (2024). From efficacy to effectiveness: A comprehensive framework for monitoring, evaluating and optimizing seasonal malaria chemoprevention programmes. *Malaria Journal*, 23, 39. <https://doi.org/10.1186/s12936-024-04860-y>
- [8] Mohamed, M. O. (2024). Influence of monitoring and evaluation practices on performance of NGO-funded projects. *IOSR Journal of Humanities and Social Science*, 29(5), 08–25.
- [9] Ajisegiri, W. S., Abimbola, S., Tesema, A. G., et al. (2021). Aligning policymaking in decentralized health systems. *PLOS Global Public Health*, 1(11), e0000050. <https://doi.org/10.1371/journal.pgph.0000050>
- [10] Croke, K., & Ogbuoji, O. (2024). Health reform in Nigeria: The politics of PHC and UHC. *Health Policy and Planning*, 39(1), 22–31. <https://doi.org/10.1093/heapol/czad107>
- [11] Issifu, R., & Agyapong, D. (2023). Monitoring and evaluation practices and project outcomes. *Cogent Business & Management*, 10(3), 2279793. <https://doi.org/10.1080/23311975.2023.2279793>
- [12] Mahyoub, S. A. (2023). The influence of monitoring and evaluation on project performance among NGOs in Yemen (Master's thesis).
- [13] Tengan, C., & Aigbavboa, C. (2018). The role of monitoring and evaluation in construction project management. Springer. https://doi.org/10.1007/978-3-319-73888-8_89
- [14] Olwenyi, M. C., Kyalo, D. N., Nyaonje, R., & Kikwata, R. W. (2025). Utilisation of monitoring and evaluation information and project performance. *Australian Journal of Business and Management Research*, 9(2), 17–31. <https://doi.org/10.52283/NSWRCA.AJBMR.20250902A06>
- [15] Capili, B. (2021). Cross-sectional studies. *American Journal of Nursing*, 121(10), 59–62. <https://doi.org/10.1097/01.NAJ.0000794280.73744.fe>
- [16] Wang, X., & Cheng, Z. (2020). Cross-sectional studies: Strengths, weaknesses, and recommendations. *Chest*, 158(1S), S65–S71. <https://doi.org/10.1016/j.chest.2020.03.012>
- [17] Ba, A. (2021). How to measure monitoring and evaluation system effectiveness? *African Evaluation Journal*, 9(1), a553. <https://doi.org/10.4102/aej.v9i1.553>
- [18] Nigeria Network of NGOs (NNNGO). (2024). Member directory. <https://web.nnngo.org/ngos-directory-3/>
- [19] Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper & Row.
- [20] Karanja, J. W., & Yusuf, M. (2018). Role of monitoring and evaluation on performance of NGO projects. *International Journal of Management and Commerce Innovations*, 6(1), 649–664.
- [21] Zapf, A., Wiessner, C., & König, I. R. (2024). Regression analyses and their particularities in observational studies. *Deutsches Ärzteblatt International*, 121(4), 128–134. <https://doi.org/10.3238/arztebl.m2023.0278>
- [22] Adebayo, T., & Olofin, M. (2019). Performance evaluation of public health NGOs using composite indicators. *Nigerian Journal of Public Health*, 25(3), 211–226.
- [23] Akinyemi, K., & Adejumo, A. (2018). Influence of monitoring and evaluation systems on maternal and child health programs in selected Nigerian NGOs. *African Journal of Health Systems*, 13(2), 89–101.
- [24] Kananura, R. M., Ekirapa-Kiracho, E., Paina, L., Bumba, A., Mulekwa, G., Nakiganda-Busiku, D., Oo, H. N. L., Kiwanuka, S. N., George, A., & Peters, D. H. (2017). Participatory monitoring and evaluation approaches that influence decision-making. *Health Research Policy and Systems*, 15(Suppl 2), 107. <https://doi.org/10.1186/s12961-017-0274-9>
- [25] Agyapong, D., Agyapong, G. K. Q., & Agyei-Poku, B. (2024). Implications of monitoring and evaluation systems for SMEs in some selected metropolis in Ghana. *Journal of Business and Enterprise Development*, 12(1), 1–24. <https://doi.org/10.47963/jobed.v12i1.1529>

- [26] Bello, A., & Ekong, I. (2022). Stakeholder participation and monitoring effectiveness in Nigerian public health projects: A participatory rural appraisal approach. *Journal of African Development Studies*, 8(1), 45–60.
- [27] Kusek, J. Z., & Rist, R. C. (2004). Ten steps to a results-based monitoring and evaluation system. World Bank. <https://doi.org/10.1596/0-8213-5823-5>
- [28] Breuer, E., Lee, L., De Silva, M., & Lund, C. (2016). Using theory of change to design and evaluate public health interventions. *Implementation Science*, 11, 63. <https://doi.org/10.1186/s13012-016-0422-6>
- [29] Banerjee, S., Fullerton, C. E., Gaharwar, S. S., & Jaselskis, E. J. (2025). Strategic web-based data dashboards as monitoring tools. *Buildings*, 15(13), 2204. <https://doi.org/10.3390/buildings15132204>
- [30] Otorkpa, O. J., Alao, J. O., & Olaiya, A. P. (2025). Enhancing monitoring and evaluation of digital health interventions. *Journal of Global Health*, 15, 03013. <https://doi.org/10.7189/jogh.15.03013>
- [31] Hatry, H. P. (2006). *Performance measurement: Getting results* (2nd ed.). Urban Institute Press.
- [32] Bhatti, M. I., Awan, H., & Razaq, Z. (2014). The key performance indicators (KPIs) and their impact on overall organizational performance. *Quality & Quantity*, 48(6), 3127–3143. <https://doi.org/10.1007/s11135-013-9945-y>
- [33] Kasser, G. (2024). Is management by objectives (MBO) still relevant? *ARPHA Conference Abstracts*, 7, e129557. <https://doi.org/10.3897/aca.7.e129557>
- [34] Robertson, T., & Sawadogo-Lewis, T. (2022). Building coherent monitoring and evaluation plans. *Global Health Action*, 15(sup 1), 2067396. <https://doi.org/10.1080/16549716.2022.2067396>
- [35] Ogundipe, A., & Awolowo, S. (2021). Monitoring and evaluation systems and organizational learning. *Journal of Health Policy and Management*, 6(1), 13–24.
- [36] Ojo, A., & Balogun, T. (2021). Barriers and enablers of M&E effectiveness in public health NGOs. *African Evaluation Journal*, 9(2).
- [37] Mporu, M., Semo, B. W., Grignon, J., et al. (2014). Strengthening monitoring and evaluation systems in resource-limited countries. *BMC Public Health*, 14, 1032. <https://doi.org/10.1186/1471-2458-14-1032>
- [38] Shuna, S., & Kithandi, C. K. (2024). Monitoring and evaluation practices and performance of health development projects in Kenya. *International Journal of Scientific and Research Publications*, 14(12), 269–277. <https://doi.org/10.29322/IJSRP.14.11.2024.p155272>
- [39] Hanson, J. D., Melnyk, S. A., & Calantone, R. (2011). Defining and measuring alignment in performance management. *International Journal of Operations & Production Management*, 31(10), 1089–1114. <https://doi.org/10.1108/01443571111172444>
- [40] Ilesanmi, O. S., & Afolabi, A. A. (2022). Sustainability of donor-funded health-related programs beyond the funding lifecycle in Africa: A systematic review. *Cureus*, 14(5), e24643. <https://doi.org/10.7759/cureus.24643>
- [41] Huffstetler, H. E., Bandara, S., Bharali, I., Kennedy McDade, K., Mao, W., Guo, F., Zhang, J., Riviere, J., Becker, L., Mohamadi, M., Rice, R. L., King, Z., Farooqi, Z., Zhang, X., Yamey, G., & Ogbuonji, O. (2022). The impacts of donor transitions on health systems in middle-income countries: A scoping review. *Health Policy and Planning*, 37(9), 1188–1202. <https://doi.org/10.1093/heapol/czac063>
- [42] Mutinda, J., & Ngahu, S. (2016). The role of monitoring and evaluation in enhancing NGO performance. *International Journal of Economics, Commerce and Management*, 4(10), 79–91.
- [43] Kim, M., Song, J., & Triche, J. (2014). Toward an integrated framework for innovation in service. *Information Systems Frontiers*, 17(3), 533–546. <https://doi.org/10.1007/s10796-014-9505-6>
- [44] Workneh, E. Y., & Aga, D. A. (2023). The effect of monitoring and evaluation practices on project success. *African Journal of Leadership and Development*, 7(2). <https://doi.org/10.20372/ajold.2022.7.2.2>