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Monitoring and Evaluation Practices and Performance of Maternal Health and Family Planning Projects: Evidence from the NPI EXPAND Project in Narok County, Kenya

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Abstract

Monitoring and evaluation (M&E) is central to project learning, accountability, and evidence-informed decision-making. Yet, there is limited empirical evidence on how M&E practices relate to the performance of maternal health and family planning (MH/FP) projects implemented in pastoralist and culturally conservative settings. This study examined the relationship between M&E practices and the performance of the New Partnerships Initiative (NPI) EXPAND Project in Narok County, Kenya. Project performance was assessed through maternal health outcomes, family planning uptake, service accessibility, and stakeholder satisfaction, consistent with the operationalisation adopted in the study. Guided by the Results-Based Management Framework, the study employed a mixed-methods approach combining cross-sectional descriptive survey and correlational designs. Data were collected from 292 Community Health Volunteers, healthcare providers, and project team members using structured questionnaires, key informant interviews, and focus group discussions. M&E practices recorded a composite mean of 3.76, indicating implementation to a large extent, although monitoring planning and design were comparatively weaker than the use of monitoring results. The findings revealed a strong positive relationship between M&E practices and project performance (r = .897, p < .05), with M&E accounting for 80.5% of the observed variation in performance (R^2 = .805, p < .05). The findings highlight the importance of systematic monitoring, effective feedback mechanisms, and timely use of evidence in improving programme quality and responsiveness. These lessons extend beyond MH/FP programming to quality assurance and evaluation systems in community and health education programmes where continuous monitoring, learning, and evidence-informed improvement are essential. The study recommends strengthening M&E planning, feedback mechanisms, and the systematic use of monitoring evidence to enhance programme performance and quality.

Keywords: *Monitoring and Evaluation; Project Performance; Quality Assurance; Maternal Health; Family Planning; Community Education*

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1.0 Introduction

Monitoring and evaluation has increasingly been recognized as an indispensable driver of accountability, learning, and results attainment in development programming worldwide. Globally, maternal health remains a defining public health priority central to Sustainable Development Goal 3, yet about 287,000 women died from pregnancy related causes in 2020, with 94 percent of these deaths occurring in low and middle income countries, largely from preventable causes (World Health Organization, 2023). International agencies including the United Nations Development Programme, the World Bank, and the Organisation for Economic Co-operation and Development have since the late 1990s promoted Results Based Management systems that emphasize strategic planning, monitoring, and reporting as the means of tracking whether health investments translate into measurable results (OECD, 2002).

Within the African region, empirical evidence continues to affirm the centrality of monitoring and evaluation to maternal health project success. In Uganda, a quasi-experimental study covering 24 health facilities demonstrated that structured monitoring and evaluation systems contributed to a 28 percent increase in antenatal care completion rates (Nambogo *et al*., 2020). In Ethiopia, monitoring capacity measured through data collection tools, staff training, and reporting frequency predicted service quality in maternal health projects with an explanatory power of 41 percent (Gebre & Alemu, 2022). A cross national comparative study spanning Kenya, Tanzania, and Malawi similarly found that maternal health programs employing real time digital dashboards and routine feedback mechanisms recorded more consistent project outcomes than those relying on periodic reporting alone (Chirwa *et al*., 2020), while in Ghana, integration of monitoring and evaluation into maternal mortality reduction strategies reduced duplication of services by 31 percent (Amponsah *et al*., 2022).

In Kenya, maternal mortality remains high at 355 deaths per 100,000 live births (Kenya Demographic and Health Survey, 2022), and devolution has decentralized responsibility for monitoring maternal health programs to county and community levels, where capacity constraints frequently undermine consistency. A descriptive survey conducted in Meru and Tharaka Nithi counties found that monitoring and evaluation frameworks correlated significantly with improved family planning record accuracy and timely service delivery (Muthomi & Kiruja, 2021), while a cross sectional study in Mombasa County established that facilities utilizing participatory monitoring and evaluation approaches were more likely to make quality decisions (Oginga *et al*., 2023). However, studies conducted in West Pokot and Turkana counties revealed that health projects in pastoralist regions often experience low monitoring and evaluation uptake due to staff shortages and the absence of context specific tools (Njuguna & Chebet, 2023).

Narok County illustrates this tension between global monitoring standards and local implementation realities. The county records Kenya's highest teenage pregnancy rate at 40 percent and a facility based delivery rate of only 32 percent, set against a backdrop of pastoralist mobility and cultural diversity (The Star, 2024; Kenya Ministry of Health, 2024). The NPI Expand Project, implemented in the county between 2019 and 2024, prioritized monitoring and evaluation alongside stakeholder involvement and capacity building as core project management practices. By 2024, only 42 facilities in the county had received supportive supervision and 43 had undergone data quality assessment, while just 22 Maternal and Perinatal Death Surveillance and Response

meetings had been convened, pointing to persistent coverage gaps within the monitoring architecture (Population Services Kenya, 2024). Cultural norms in Narok, including preference for home births, low male involvement, and stigma surrounding contraceptive use, remain deeply entrenched and may condition how effectively monitoring systems translate into improved outcomes (Akinyi *et al*., 2021). This study therefore examined the influence of monitoring and evaluation on the performance of maternal health and family planning projects in Narok County, and further tested whether cultural attitudes moderate this relationship.

Objective: To determine the influence of monitoring and evaluation on the performance of maternal health and family planning projects under the NPI Expand Project in Narok County.

H_{01}: Monitoring and evaluation has no significant influence on the performance of maternal health and family planning projects under the NPI Expand Project in Narok County.

2.0 Literature Review

2.1 Theoretical Review

The study was anchored on the Results Based Management Framework, promoted since the late 1990s by international development agencies including the United Nations Development Programme, the World Bank, and the OECD (OECD, 2002). The framework emphasizes the achievement of tangible results through strategic planning, monitoring, and reporting, and supports the systematic use of indicators, baselines, and evaluations to track progress and inform decision making in donor funded health programs. Although its reliance on quantifiable metrics can sometimes reduce attention to qualitative and contextual outcomes, the framework offers an appropriate foundation for analyzing how monitoring and evaluation systems contribute to accountability and learning within the NPI Expand Project.

2.2 Empirical Review

2.2.1 Monitoring and Evaluation and Performance of Maternal Health and Family Planning Projects

Monitoring and evaluation has become indispensable in guiding project decisions, improving accountability, and tracking health outcomes in maternal and family planning programs. In Uganda, a quasi-experimental study involving 24 health facilities demonstrated that structured monitoring and evaluation systems contributed to a 28 percent increase in antenatal care completion rates (Nambogo *et al*., 2020), while in Meru and Tharaka Nithi counties, Kenya, monitoring and evaluation frameworks significantly correlated with improved family planning record accuracy and timely health service delivery (Muthomi & Kiruja, 2021). In Ethiopia, monitoring and evaluation capacity predicted service quality in maternal health projects with an explanatory power of 0.41 (Gebre & Alemu, 2022).

Effective monitoring and evaluation has also been shown to enhance long term sustainability of maternal health programs. A cross national comparative study across Kenya, Tanzania, and Malawi found that programs with real time digital dashboards and routine feedback mechanisms

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experienced more consistent outcomes (Chirwa *et al*., 2020), while in Ghana, integration of monitoring and evaluation improved decision making and reduced duplication of maternal health services by 31 percent (Amponsah *et al*., 2022). In Mombasa County, quality decision making was more likely in maternal and newborn health programs using participatory monitoring and evaluation approaches at initiation and implementation stages than in those that did not (Oginga *et al*., 2023).

Performance tracking through monitoring and evaluation further enables timely programmatic adjustment. In Machakos County, projects with mid term reviews and data driven decision making frameworks recorded a 23 percent increase in postpartum care visits (Kimani & Wekesa, 2021), while in Rwanda, district level maternal projects with quarterly review meetings were more successful in achieving contraceptive prevalence targets than those with annual reviews (Mugisha *et al*., 2021). Despite these benefits, studies in West Pokot and Turkana found that health projects in pastoralist regions often suffer low monitoring and evaluation uptake due to staff shortages and a lack of tailored tools (Njuguna & Chebet, 2023), underscoring the need for localized, participatory monitoring designs that reflect the sociocultural dynamics of target populations, a gap the current study addresses within the NPI Expand Project in Narok County.

2.3 Conceptual Framework

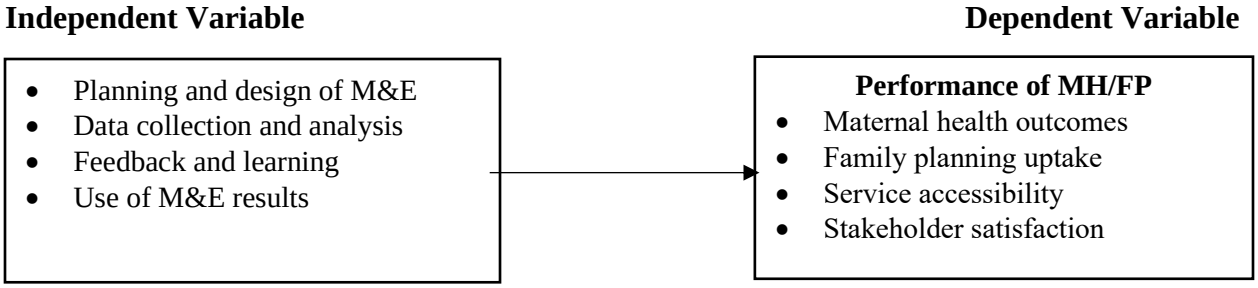

Table 1: Conceptual Framework for Monitoring and Evaluation, and Performance of Maternal Health and Family Planning Projects

3.0 Research Methodology

The study adopted a mixed methods approach, combining quantitative and qualitative methods to obtain both statistical evidence and contextual explanations of the relationship between monitoring and evaluation and project performance. The quantitative component employed a descriptive survey and correlational designs, while the qualitative component provided additional contextual insights (Creswell & Creswell, 2018). The target population comprised 3,016 stakeholders, including Community Health Volunteers, Health Care Providers and NPI EXPAND Project Team members in Narok County. Using Yamane's (1967) formula at a 95 percent confidence level, a sample of 414 respondents was determined, comprising 352 respondents selected through proportionate stratified and simple random sampling and 62 project team members selected through a census approach.

Quantitative data were collected using a structured five point Likert scale questionnaire measuring monitoring and evaluation, cultural attitudes and project performance. The questionnaire items

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were adapted from established instruments relevant to project management and public health research (Gertler *et al*., 2016). Field (2018) provided guidance on the statistical procedures used in analysing the quantitative data. Content and construct validity were established through expert review and exploratory factor analysis following a pilot study conducted in Bomet County. Reliability was assessed using Cronbach's Alpha, with a coefficient of 0.70 or higher considered acceptable (Nunnally & Bernstein, 1994). Qualitative data were collected through 12 Key Informant Interviews and four Focus Group Discussions, providing contextual information to complement the quantitative findings.

Quantitative data were analyzed using SPSS version 26. Descriptive statistics summarized the study variables, while Pearson's correlation and simple linear regression tested the direct relationship between monitoring and evaluation and project performance using the model $Y = \beta_0 + \beta_3 X_3 + \varepsilon$. Moderation was tested using Hayes' (2018) PROCESS Macro Model 1, applying the equation $\text{Performance } (Y) = \beta_0 + \beta_1(\text{MEL}) + \beta_2(\text{CULT}) + \beta_3(\text{MEL} \times \text{CULT}) + \varepsilon$. Significance was tested at $\alpha = 0.05$, and qualitative data were analyzed thematically.

4.0 Results and Discussion

4.1 Response Rate

Table 2: Questionnaire Return Rate

Category of Respondents	Sample Size	Returned	Return Rate (%)
Community Health Volunteers	262	185	70.3
Health Care Providers	90	63	70.0
NPI EXPAND Project Team	62	44	71.0
Total	**414**	**292**	**70.5**

A total of 414 questionnaires were administered, of which 292 were returned, representing an overall response rate of 70.5 percent, considered adequate for analysis and generalization of findings (Mugenda & Mugenda, 2003).

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4.2 Descriptive Analysis of Monitoring and Evaluation

Table 3: Descriptive Statistics for Monitoring and Evaluation

Statement	NAA F(%)	TSE F(%)	TME F(%)	TGE F(%)	TVGE F(%)	Mean	Std. Dev.
M&E plans were in place before project launch	76(26.0)	58(19.9)	54(18.5)	48(16.4)	56(19.2)	2.83	1.466
Baseline assessments were conducted before implementation	3(1.0)	19(6.5)	38(13.0)	129(44.2)	103(35.3)	4.06	0.914
Regular data collection was carried out during the project	3(1.0)	34(11.6)	36(12.3)	121(41.4)	98(33.6)	3.95	1.009
Data collected was analyzed in a timely manner	4(1.4)	26(8.9)	57(19.5)	116(39.7)	89(30.5)	3.89	0.985
Monitoring indicators were aligned with project goals	3(1.0)	23(7.9)	52(17.8)	119(40.8)	95(32.5)	3.96	0.955
Results were communicated to implementers regularly	7(2.4)	44(15.1)	72(24.7)	98(33.6)	71(24.3)	3.62	1.082
Learning sessions were held to reflect on M&E findings	6(2.1)	35(12.0)	60(20.5)	107(36.6)	84(28.8)	3.78	1.055
M&E reports informed decision making	10(3.4)	51(17.5)	69(23.6)	93(31.8)	69(23.6)	3.55	1.131
Challenges were identified through M&E processes	6(2.1)	38(13.0)	73(25.0)	101(34.6)	74(25.3)	3.68	1.054
Project performance was regularly reviewed	11(3.8)	52(17.8)	79(27.1)	87(29.8)	63(21.6)	3.48	1.126
Data accuracy and reliability were ensured	4(1.4)	16(5.5)	33(11.3)	115(39.4)	124(42.5)	4.16	0.926
Beneficiary feedback informed M&E reports	3(1.0)	17(5.8)	30(10.3)	123(42.1)	119(40.8)	4.16	0.902
Composite Mean and SD						**3.76**	**1.06**

Monitoring and evaluation recorded a composite mean of 3.76, indicating implementation to a large extent. Use of monitoring results emerged as the strongest dimension (M = 3.93), with data accuracy and reliability (MEL11, M = 4.16) and beneficiary feedback informing reports (MEL12, M = 4.16) recording the highest individual scores and the lowest standard deviations, indicating strong stakeholder agreement that data quality assurance and participatory feedback were well institutionalized, consistent with Muthomi and Kiruja (2021) and Oginga *et al*. (2023).

Planning and design of monitoring and evaluation recorded the lowest sub-composite mean (3.61), driven largely by MEL1 (M = 2.83, SD = 1.466), the weakest statement overall, indicating that

formal monitoring plans were often not in place before project launch. This was corroborated during Key Informant Interviews, where a Monitoring and Evaluation Officer noted that tools were sometimes refined only after implementation had begun, diverging from Nambogo *et al*. (2020), who found early structured planning strengthened accountability. In contrast, MEL2 (baseline assessments, M = 4.06) scored strongly, suggesting that while formal plans lagged, baseline data collection was more consistently prioritized.

Data collection and analysis (M = 3.82) and feedback and learning (M = 3.67) recorded moderate performance. Within feedback and learning, MEL8 (M&E reports informed decision making, M = 3.55) was comparatively weak, with Focus Group Discussion participants noting that not all recommendations were consistently acted upon due to resource constraints, consistent with Amponsah *et al*. (2022).

4.3 Correlation Analysis of Monitoring and Evaluation and Performance

Table 4: Correlation Analysis of Monitoring and Evaluation and Performance of MHFP Projects

Variables		Monitoring and Evaluation	Performance
Monitoring and Evaluation	Pearson Correlation	1	0.897**
	Sig. (2-tailed)		0.000
	n	292	292
Performance	Pearson Correlation	0.897**	1
	Sig. (2-tailed)	0.000	
	n	292	292

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

A very strong positive and statistically significant relationship was established between monitoring and evaluation and project performance ($r = 0.897$, $p < 0.05$, $n = 292$). This finding indicates that stronger monitoring and evaluation practices were associated with better project performance. The result is consistent with Nambogo *et al*. (2020) and Muthomi and Kiruja (2021), who similarly reported positive relationships between monitoring and evaluation practices and project performance. The consistency suggests that effective monitoring and evaluation, particularly through tracking progress and identifying implementation challenges, contributes to improved project outcomes. The finding therefore provides empirical support for the importance of monitoring and evaluation in enhancing MHFP project performance.

4.4 Regression Analysis of Monitoring and Evaluation and Performance of MHFP Projects

Simple linear regression analysis was conducted to determine whether monitoring and evaluation significantly influenced the performance of MHFP projects. The results are presented separately in the model summary, ANOVA and regression coefficients tables.

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Table 6: Model Summary for Monitoring and Evaluation and Performance of MHFP Projects

Model	R	R^2	Adjusted R^2	Std. Error	Durbin Watson
1	0.897	0.805	0.804	0.33814	1.694

The results show a strong positive relationship between monitoring and evaluation and project performance, as indicated by R = 0.897. The coefficient of determination (R^2 = 0.805) indicates that monitoring and evaluation explained 80.5% of the variation in project performance. The remaining 19.5% was explained by other factors not included in the model. The adjusted R^2 of 0.804, indicates that the model retained its explanatory power after adjustment. The Durbin Watson statistic of 1.694 suggests that there was no serious autocorrelation problem in the residuals.

Table 7: ANOVA for Monitoring and Evaluation and Performance of MHFP Projects

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	136.541	1	136.541	1194.176	< 0.05
Residual	33.158	290	0.114		
Total	169.699	291			

The ANOVA results indicate that the regression model was statistically significant, F(1, 290) = 1194.176, $p < 0.05$. Since the significance value is below the 0.05 threshold, the model significantly predicts project performance. This confirms that monitoring and evaluation provides a statistically significant explanation of variations in the performance of MHFP projects.

Table 8: Regression Coefficients for Monitoring and Evaluation and Performance

Predictor	B	Std. Error	β	t	Sig.
Constant	0.698	0.090	—	7.774	< 0.05
Monitoring and Evaluation	0.818	0.024	**0.897**	34.557	< 0.05

The coefficient results demonstrate that monitoring and evaluation had a positive and statistically significant effect on project performance. The unstandardised coefficient (B = 0.818) indicates that a one unit increase in monitoring and evaluation was associated with a 0.818 unit increase in project performance. The standardised regression coefficient (β = 0.897, pronounced *Beta*) indicates a strong positive effect of monitoring and evaluation on project performance. The t value of 34.557 and significance level of $p < 0.05$ confirm that this effect was statistically significant. The findings imply that stronger monitoring and evaluation practices are associated with better project performance. Effective monitoring and evaluation can facilitate systematic tracking of project progress, identification of implementation problems, timely corrective action and assessment of whether project activities are achieving their intended objectives. The finding is consistent with Kimani and Wekesa (2021) and Mugisha *et al*. (2021), who reported positive

relationships between monitoring and evaluation practices and project outcomes. Therefore, the null hypothesis H_{01}, which stated that monitoring and evaluation has no significant effect on the performance of MHFP projects, is rejected.

5.0 Conclusion and Recommendations

5.1 Conclusion

Monitoring and evaluation is a strong, positive, and statistically significant predictor of maternal health and family planning project performance, explaining 80.5 percent of its variation, with data quality assurance and use of monitoring results as the strongest contributors and formal pre-launch planning as the weakest. Cultural attitudes, particularly gender norms and traditional taboos, exert a significant direct effect on performance but do not significantly moderate the monitoring and evaluation to performance relationship, indicating that well designed monitoring systems retain their effectiveness regardless of prevailing cultural context.

5.2 Recommendations

The Ministry of Health and NPI Expand implementers should institutionalize monitoring and evaluation planning before project launch, given that MEL1 recorded the weakest score in the study. Feedback and learning forums should be strengthened, particularly around translating M&E reports into decisions (MEL8). Given the strong direct effect of cultural attitudes, particularly gender roles and traditional taboos, implementers should continue pairing robust monitoring systems with culturally responsive community engagement targeting male involvement and traditional leadership structures. Future research should apply mediation or multilevel modelling to further unpack how monitoring and evaluation and cultural context jointly shape outcomes in other pastoralist counties.

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