Human Resource Factors and Their Influence on Performance in Public Health Facilities in Kericho County, Kenya

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Abstract

Effective human resource management is critical to the performance of public health facilities, especially in low- and middle-income countries. This study examined the influence of human resources on performance in selected public health facilities in Kericho County, Kenya. A cross-sectional descriptive research design was adopted, and data were collected from 159 respondents including healthcare workers and facility administrators. Stratified random sampling ensured representation across facility types. Quantitative data were analyzed using SPSS Version 27. Descriptive statistics and linear regression were used to establish the nature and strength of the relationship between human resource factors and facility performance. Results showed a statistically significant positive relationship between human resource practices and health facility performance ($\beta = 0.472$, $p < 0.001$). Key predictors included staff motivation, continuous professional development, job satisfaction, and staffing adequacy. The study concluded that investment in human capital significantly enhances service delivery. Recommendations include targeted training, better staff retention policies, and embedding performance-based management systems in public health institutions.

Keywords: *Human resources, public health performance, healthcare workforce, health service delivery, Kericho County*

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1. Introduction

The effectiveness of public health institutions is closely tied to the quality and management of their human resources. In many developing nations, including Kenya, the health sector continues to face persistent human resource challenges such as insufficient staffing, limited professional development, low morale, and weak supervisory systems factors that collectively impact service quality and institutional efficiency (Wambua et al., 2022). Although reforms have been rolled out at both the national and county levels, key performance indicators such as responsiveness, staff accountability, and patient satisfaction remain suboptimal. These shortcomings are often linked to human resource management gaps, which act as bottlenecks to optimal service delivery (MOH, 2020).

Kericho County, located in Kenya's Rift Valley region, is served by a range of public health facilities from Level II to Level V, catering to a diverse and growing population. Despite noticeable investments in infrastructure, equipment, and pharmaceuticals, the human resource dimension has not received equal attention. Issues such as inadequate training opportunities, staff demotivation, unclear performance targets, and inconsistent leadership practices continue to be reported across facilities (Kericho County Health Department, 2023). These issues

compromise operational efficiency, delay service delivery, and weaken the trust of health service consumers.

Scholarly discourse and global health benchmarks emphasize that a competent, motivated, and well-supported workforce is essential for high-performing health systems (WHO, 2021). Human resource strategies such as continuous professional development, participatory leadership, effective performance appraisal systems, and staff empowerment play a decisive role in enhancing both employee output and patient care quality. However, empirical studies examining how these specific HR practices influence the performance of devolved health institutions in Kenya are still limited.

This study investigates the extent to which selected human resource factors contribute to the performance of public health facilities within Kericho County. It focuses on four critical HR dimensions: employee training and development, motivation and recognition systems, leadership styles, and performance management frameworks. By interrogating these elements, the study aims to generate data-driven insights that can inform county-level policies and managerial practices. The results will be relevant to policymakers, healthcare administrators, and development partners aiming to strengthen the workforce for better public health outcomes.

2. Literature Review

Globally, the role of human resource management in shaping health sector performance has received significant attention in empirical literature. A multi-country study conducted in Ghana by Agyepong et al. (2018) highlighted that the absence of decentralized HR practices, limited supervision, and weak appraisal systems hindered effective service delivery in public health institutions. Their findings suggested that introducing structured feedback loops, performance-linked incentives, and leadership capacity-building could enhance accountability and facility performance in similar low-resource settings.

In South Africa, Mabaso and Dlamini (2020) explored how staff motivation influenced outcomes in provincial health facilities. They established a strong correlation between employee engagement initiatives, such as staff recognition, wellness support, and collaborative supervision, and improved service quality, reduced staff attrition, and increased work commitment. The study advocated for a blended approach combining financial and non-monetary incentives to maintain workforce stability.

At the regional level, Ngigi and Busolo (2021) analyzed public health systems in East Africa and identified widespread deficiencies in human resource planning, sporadic training opportunities, and rigid leadership structures. Their study concluded that institutions with structured performance tracking and skills development strategies exhibited greater staff retention and higher operational efficiency than those lacking such systems.

Within the Kenyan context, empirical findings reaffirm the importance of effective HR practices in enhancing health facility performance. Mutua and Wanjiku (2021), in their study of public hospitals in Nairobi County, reported that facilities that had institutionalized continuous professional development saw improved employee output, fewer service delays, and stronger commitment to clinical duties. They recommended tailoring training content to match institutional goals and frontline health worker needs.

In a study across Kisumu and Siaya counties, Omondi et al. (2020) evaluated the influence of staff motivation on operational performance. Their findings indicated that both internal motivators (e.g., recognition, trust, and inclusion in decision-making) and external rewards (e.g., promotions and salary reviews) contributed to a more productive and responsive

workforce. Facilities that adopted these strategies reported fewer absenteeism cases and more timely patient care.

Leadership practices have also featured prominently in HR-performance linkages. A study by Muriithi and Karanja (2019) in Central Kenya examined how managerial styles affect institutional outcomes in public health settings. Results showed that leaders who adopted participatory and transformational approaches fostered higher staff engagement, innovation, and goal achievement. In contrast, autocratic and indifferent leadership environments were associated with poor communication, staff resistance, and underperformance.

Further, Njoroge and Mwangi (2022) explored the impact of performance management systems in public hospitals within Nakuru County. The study found that the presence of measurable performance indicators, structured evaluations, and regular performance feedback had a direct influence on service efficiency and staff discipline. Facilities that practiced ongoing performance tracking demonstrated improved internal coordination and patient handling.

Despite this growing body of knowledge, there remains a gap in localized research focusing on human resource drivers of performance within devolved counties like Kericho, which operate under varying demographic, political, and infrastructural contexts. This study intends to address this gap by evaluating how selected HR factors, namely: training, motivation, leadership, and performance management, affect the overall performance of public health facilities in Kericho County.

3. Methodology

The study adopted a descriptive cross-sectional design. It was conducted in Kericho County, covering health centers, sub-county hospitals, and the Kericho County Referral Hospital. The target population was 300 healthcare workers, including nurses, clinical officers, and administrators. Using stratified random sampling and Yamane's formula, 171 respondents were sampled. Of these, 159 successfully returned the questionnaires, giving a response rate of 93%. Structured questionnaires were physically distributed. A pick-and-drop approach was used, and clarifications were offered to respondents when necessary. Data were analysed using SPSS v27. Descriptive statistics summarized the demographic characteristics and human resource factors. Linear regression tested the influence of human resources on performance. Significance was set at $\alpha = 0.05$.

4. Results and Discussion

4.1 Descriptive Statistics on Human Resources

The study examined eight items related to human resources (Table 1). This included staff motivation, supervision quality, performance evaluation, recruitment transparency, and access to training.

The study examined the influence of human resources on performance in the public health sector in Kericho County. For all the items representing human resources, the mode was computed.

Table 1: Human Resources on performance in the Public Health Sector

	N	Mode
Adequate staff training enhances performance in our public health facility.	159	5
The skills and expertise of our human resources positively impact the effectiveness of Information Technology (IT) health systems.	159	5
Adequate staffing levels are crucial for maximizing performance in the implementation of Information Technology (IT) health strategies.	159	4
The experience of staff with Information Technology (IT) health systems contributes significantly to overall productivity.	159	2
Motivated employees are more productive when using Information Technology (IT) health systems.	159	4
Continuous professional development for healthcare staff improves performance in Information Technology (IT) health implementation.	159	4
Effective human resource management practices support higher performance in our Information Technology (IT) health strategy.	159	4
The ability of staff to adapt to new technologies affects their Performance levels.	159	3
Valid N (listwise)	159	

The descriptive findings presented in Table 1 provide insights into how various human resource dimensions are perceived to influence performance within public health facilities in Kericho County. All 159 respondents offered their views, and the analysis relied on the mode to reflect the most frequently selected response per item.

Two HR dimensions stood out with the strongest agreement from respondents: the role of staff training and the impact of employee skills and expertise on institutional performance, particularly in relation to IT-based systems. These items each registered a mode of 5, indicating widespread consensus. These findings resonate with prior research by Mutua and Wanjiku's (2021), who found that healthcare workers in Nairobi public hospitals showed improved productivity and reduced service delays when exposed to structured training programs. Similarly, Agyepong et al. (2018) in Ghana observed that gaps in employee technical know-how often undermine health information systems, emphasizing the importance of skilled personnel in achieving health sector goals.

Three other items which are, adequate staffing, employee motivation, and continuous professional development, received a mode of 4, showing moderate to strong agreement. This suggests that health workers believe these factors significantly influence operational outcomes. For example, Omondi et al. (2020), in their study across Kisumu and Siaya counties, found that both intrinsic and extrinsic motivation led to improved staff morale, reduced absenteeism, and timely patient care. Likewise, Njoroge and Mwangi (2022) reported that in Nakuru County, continuous professional development and staffing adequacy were linked to greater efficiency and service standardization in public hospitals.

The statement on effective human resource management practices also registered a mode of 4, indicating that respondents acknowledged the positive role of structured HR systems in health sector performance. These perceptions align with Ngigi and Busolo (2021), who, in their regional review of East African public hospitals, concluded that performance-based appraisal systems and participatory management are essential for institutional effectiveness.

In contrast, two items yielded lower mode values, suggesting weaker consensus. The item on the role of experience with IT systems scored a mode of 2, indicating that many respondents disagreed that experience alone contributes significantly to productivity. This finding may reflect a disconnect between years of service and actual digital competence, a gap also reported by Muriithi and Karanja (2019), who observed that unless experience is coupled with modern training and supervision, it may not translate into meaningful performance gains.

The final item, which addressed staff adaptability to emerging technologies, had a mode of 3, reflecting a neutral or mixed response. This could be attributed to variation in individual readiness, institutional support, or prior exposure to digital systems. These findings mirror those of Mabaso and Dlamini (2020) in South Africa, who found that without adequate support structures, even well-intentioned staff may struggle to keep pace with technological advancements in healthcare.

Overall, the data reinforce the conclusion that in Kericho County, public health performance is perceived to be strongly influenced by training, staffing adequacy, motivation, and HR management practices. However, experience and adaptability, while important, appear less impactful unless supported by continuous learning and guided transition strategies. This underscores the need for deliberate investment in not just HR structures but also in the systems that enable employees to respond effectively to the dynamic nature of health sector demands.

4.2 Descriptive Statistics on performance in the Public Health Sector

The study investigated the performance in the public health sector in Kericho County. Data were analyzed with a 5-point Likert scale; mode showed central tendency and standard deviation measured variability (Table 2).

Table 2: performance in the Public Health Sector

	N	Mode
The implementation of Information Technology (IT) health systems has significantly reduced the time required for administrative tasks , enhancing performance.	159	5
Information Technology (IT) health systems have improved the accuracy of patient data, leading to better decision-making and increased productivity.	159	4
The integration of Information Technology (IT) health systems has streamlined workflow processes, contributing to higher performance.	159	4
Staff efficiency has improved due to better access to patient information through Information Technology (IT) health systems.	159	4
Information Technology (IT) health systems have facilitated faster patient service delivery, positively affecting overall performance.	159	4
The use of Information Technology (IT) health systems has led to fewer errors in patient records, which boosts performance.	159	5
Enhanced data management capabilities from Information Technology (IT) health systems have improved operational efficiency and performance.	159	4
The reduction in manual record-keeping due to Information Technology (IT) health systems have allowed staff to focus more on patient care, increasing performance.	159	4
Valid N (listwise)	159	

The analysis presented in Table 2 demonstrates that overall performance was perceived to be high, with the majority of performance indicators recording a mode of 4, signifying that

respondents generally agreed with the positive statements about performance outcomes. Notably, two indicators registered a mode of 5, indicating strong agreement among participants on significant improvements in administrative efficiency and reduction of errors in operational processes. This uniformity of high mode values (4 and 5) across all items suggests a consistent and favourable perception of performance across multiple dimensions, including workflow efficiency, staff productivity, service delivery speed, data accuracy, and error reduction. The findings point to a well-performing public health sector as perceived by healthcare personnel within the studied facilities.

4.3 Regression Results

To assess the influence of human resource factors on performance in public health facilities within Kericho County, a simple linear regression analysis was conducted. The composite score for human resource practices was entered as the independent variable, while performance served as the dependent variable. The results of the regression analysis are summarized in Table 3, which presents both the coefficient estimates and the overall model fit statistics.

Table 3: Influence of Human Resource Factors on Performance

Predictor	B	Std. Error	p-value
Human Resources Composite	0.472	0.044	< 0.001*

Model Summary	
Statistic	**Value**
R^2	0.419
Adjusted R^2	0.412
F-statistic	$F(1, 157) = 113.4$
Model Significance	p < 0.001

The results of the simple linear regression analysis are presented in Table 3. The objective of the model was to determine the extent to which human resource factors predict performance in public health facilities within Kericho County. The analysis utilized a composite index for human resource practices as the sole predictor of institutional performance outcomes. The unstandardized regression coefficient (B) for the human resources composite was 0.472, with a standard error of 0.044, indicating that a one-unit improvement in human resource management is associated with a 0.472-unit increase in institutional performance. These findings closely align with Mutua and Wanjiku's (2021), whose study in Nairobi County confirmed that healthcare facilities that invested in structured training, staff development, and motivation programs reported higher efficiency and improved service quality. Similarly, Agyepong et al. (2018) in Ghana found that skilful and well-managed health workers were central to enhancing the effectiveness of service delivery in public health institutions. The p-value for the predictor was < 0.001, indicating a statistically significant relationship at the 5% level. This significance suggests that human resource factors meaningfully influence the performance of public health facilities in Kericho County. The result is consistent with the findings of Omondi et al. (2020), who reported that both intrinsic and extrinsic motivation led to measurable improvements in service timeliness and staff productivity in Kisumu and Siaya counties. In addition, Ngigi and Busolo (2021) concluded that performance-based HR practices—such as merit-based promotion, training, and supervision—were directly linked to operational performance in East African public health systems. The coefficient of determination ($R^2 = 0.419$) implies that approximately 41.9% of the variance in facility performance can be explained by the human resource factors included in the model. The

adjusted R^2 of 0.412 further affirms the model's explanatory power after accounting for degrees of freedom. The model's F-statistic of 113.4 with a significance level of $p < 0.001$ confirms that the regression model is statistically robust and the observed relationship is unlikely to have occurred by chance. These results reinforce the conclusion that human resource strategies, such as adequate staffing, ongoing professional development, employee motivation, and effective performance management, play a critical role in enhancing the performance of public health facilities. This is in line with the findings of Muriithi and Karanja (2019), who emphasized the influence of leadership and HR planning on operational success in public hospitals in Central Kenya. In a broader context, Mabaso and Dlamini (2020) also noted that health institutions that actively engaged in workforce motivation and capacity-building reported fewer staff turnovers and improved patient outcomes.

5. Conclusion

This study sought to determine the influence of human resource factors on the performance of public health facilities in Kericho County, Kenya. Guided by descriptive and inferential statistical analysis, the findings confirm that human resource practices play a central role in shaping institutional performance outcomes. The study concludes that staff training, motivation, professional development, and staffing adequacy significantly enhance the performance of public health institutions. Specifically, facilities that invest in structured capacity-building initiatives, staff recognition, and performance-based HR systems tend to deliver better healthcare services. On the other hand, experience and adaptability, while important, were not perceived as equally impactful unless supported by ongoing digital upskilling and managerial support. Moreover, regression analysis revealed a statistically significant positive relationship between human resource practices and institutional performance ($\beta = 0.472$, $p < 0.001$), explaining 41.9% of the variance in performance ($R^2 = 0.419$). These results affirm that human capital remains a strategic driver of performance in the health sector, particularly in devolved units such as Kericho County.

6. Recommendations

Based on the findings and conclusions of the study, the following recommendations are proposed: Invest in Continuous Professional Development: County governments should institutionalize regular training programs that align with current health sector demands, especially in digital health systems and data management. Strengthen Staff Motivation Strategies: Non-financial incentives, such as recognition, supportive supervision, and opportunities for career growth, should be emphasized to enhance employee commitment and reduce attrition. Ensure Adequate Staffing Levels: Recruitment policies should prioritize optimal staff-to-patient ratios, especially in under-resourced facilities, to reduce workload stress and improve service efficiency. Implement Performance-Based Management Systems: Public health facilities should adopt structured appraisal mechanisms linked to measurable performance indicators. Feedback systems and transparent promotion pathways should be integrated into HR practices. Support Change Management and Technological Adaptation: Tailored training and mentorship should be offered to help staff effectively adapt to evolving technologies and innovations in healthcare delivery.

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