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Leadership Development and the Sustainability of Public–Private Partnerships Healthcare Projects in Nairobi at the Center for International Health, Education, and Biosecurity in Nairobi, Kenya

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Abstract: *Public–Private Partnerships (PPPs) are increasingly recognized as critical drivers of sustainable development, particularly in healthcare, where they provide innovative, cost-efficient solutions to complex service delivery and infrastructure challenges. The sustainability of PPP projects, however, largely depends on effective project management leadership. This study examined the influence of leadership on the sustainability of PPP healthcare projects implemented by the Center for International Health, Education, and Biosecurity (CIHEB) in Nairobi. Four dimensions were explored: leadership styles, leadership skills, leadership experience, and leadership development. A convergent parallel research design was adopted, integrating quantitative and qualitative approaches. From a target population of 404 CIHEB staff, a stratified random sample of 201 participants was selected. Data were collected through structured questionnaires and interview guides, with reliability confirmed using Cronbach's alpha ($r \geq 0.70$). Validity was ensured through content, construct, and face validation. Data were analyzed using descriptive and inferential statistics, including correlation and multiple regression in SPSS 29.0. Results revealed that leadership skills, experience, and particularly leadership development significantly enhance PPP project sustainability, while leadership styles alone did not independently predict outcomes. The study concludes that strengthening leadership development and capacity building is vital to ensuring the long-term sustainability of PPP healthcare initiatives in Nairobi.*

Keywords: Leadership, Development, Sustainability of Public-Private Partnerships, Healthcare, Projects, Center for International Health, Education, and Biosecurity in Nairobi, Kenya

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1. Introduction

Public–Private Partnerships (PPPs) have become a critical model for addressing global healthcare challenges by bridging gaps in service delivery, infrastructure, and financing. They bring together governments and private actors in collaborative ventures designed to provide innovative and cost-efficient solutions to complex health needs. The significance of PPPs is particularly evident in developing countries where healthcare systems are often constrained by limited resources, inadequate infrastructure, and systemic inefficiencies (WHO, 2022). In such contexts, PPPs offer not only a pathway to improving

access and affordability but also a mechanism for achieving sustainable development goals through enhanced service delivery and inclusive healthcare innovations (Baragade & Vadavi, 2025).

However, despite their promise, the sustainability of PPP healthcare projects remains an enduring concern. Many initiatives succeed in the short term but struggle to maintain momentum, infrastructure functionality, and stakeholder engagement beyond initial phases (Saini & Digga, 2025). Studies have shown that sustainability failures often stem less from financial or technical constraints and more from weak institutional capacity and ineffective leadership (Okumah, Ankomah, & Boateng, 2020; Liu, Zhang, & Wang, 2022). Leadership therefore emerges as the central determinant of whether PPP healthcare projects thrive or decline.

Leadership in project management is multifaceted, encompassing leadership styles, skills, experience, and deliberate leadership development. Leadership styles shape decision-making, collaboration, and adaptability in volatile healthcare environments (Kakw'u, 2024). Leadership skills such as communication, negotiation, conflict resolution, and strategic thinking ensure smooth coordination between public and private partners (Joudyian et al., 2021). Leadership experience provides practical insights into navigating complex regulatory systems, managing risks, and optimizing scarce resources. Crucially, leadership development creates avenues for continuous learning, capacity-building, and innovation, equipping leaders with new strategies to sustain PPP healthcare projects in rapidly evolving contexts (Saini & Digga, 2025). Without these dimensions, PPPs risk stagnation, mismanagement, and premature collapse.

Globally, experiences from Europe illustrate how leadership development underpins PPP sustainability. In the United Kingdom, transformational leadership has been instrumental in promoting innovation, stakeholder collaboration, and adaptability to changing healthcare needs (Budnyk et al., 2025). Germany emphasizes leadership experience, leveraging seasoned professionals to guide long-term alliances (Mavroulidis & Papadopoulos, 2023), while France prioritizes leadership development frameworks that cultivate negotiation, financial acumen, and strategic foresight (Wang & Ma, 2023). These examples demonstrate that strong leadership competencies align PPP outcomes with broader welfare and efficiency goals, securing sustainability.

In Africa, leadership dynamics have also proven pivotal in shaping PPP success. Nigeria highlights the importance of experienced leadership in overcoming financial and regulatory barriers, while South Africa invests in capacity-building programs to nurture participative leaders who foster collaboration and inclusivity (Ntshangase & Msosa, 2022). Ghana underscores democratic and transparent leadership styles as a foundation for accountability and long-term viability (Thiyane, Sibanda, & Katrodia, 2020). Similarly, in East Africa, countries such as Tanzania and Rwanda show that effective leadership skills, including stakeholder management and strategic planning, strengthen trust, coordination, and innovation in PPP projects (Chileshe & Kavishe, 2021; Nkurunziza, 2021). These experiences reinforce that leadership development is not a peripheral factor but the cornerstone of sustainability.

Kenya provides a particularly compelling context for examining these dynamics. The country has witnessed significant expansion of PPP healthcare projects, yet their long-term sustainability remains inconsistent. Transformational and transactional leadership approaches have influenced project outcomes, with transformational leadership promoting creativity and team motivation, while transactional leadership ensures accountability and compliance (Nzioka, 2023). Leadership skills in strategic decision-making, financial management, and stakeholder engagement have further enhanced PPP effectiveness by addressing complex policy environments and resource constraints (Chileshe et al., 2022). Leadership experience has proven equally critical, with seasoned leaders demonstrating resilience and foresight in navigating healthcare partnerships (Chisika & Yeom, 2021).
Recognizing these dynamics, Kenya has introduced leadership development initiatives, including mentorship, professional training, and knowledge-sharing programs aimed at equipping healthcare leaders with relevant skills (Njue et al., 2021). These programs have improved leadership capacity within both public and private sectors, fostering governance and sustainability in PPP healthcare. However, persistent gaps remain. Many projects, including those implemented by the Center for International Health, Education, and Biosecurity (CIHEB) in Nairobi, face sustainability challenges largely attributable to deficiencies in leadership development (Theophanus, 2020). This underscores the need for deeper investigation into how leadership styles, skills, experience, and particularly leadership development, influence the long-term viability of healthcare PPPs in Kenya.

This study therefore contributes to the growing discourse on project management and sustainable development by examining leadership development as a determinant of PPP sustainability within the Kenyan healthcare sector. By focusing on CIHEB—a critical actor working with government and international partners in Nairobi's urban healthcare landscape—the research situates leadership within a complex, resource-constrained environment where sustainability is paramount. The findings are expected to provide theoretical insights into leadership–sustainability linkages, while offering practical

recommendations for strengthening leadership capacity in healthcare PPPs across Kenya and similar developing-country contexts.

1.2 Statement of the problem

Public–Private Partnerships (PPPs) are widely promoted as mechanisms for advancing sustainable development in healthcare by integrating government oversight with private sector expertise to enhance efficiency, innovation, and service delivery (Okumah, Ankomah, & Boateng, 2020; Liu, Zhang, & Wang, 2022). Ideally, PPP healthcare projects should guarantee sustainable infrastructure, reliable service continuity, and effective stakeholder collaboration. However, at the Center for International Health, Education, and Biosecurity (CIHEB) in Nairobi, sustainability has remained elusive. Reports indicate that more than 60% of PPP healthcare projects underperform in critical areas such as infrastructure maintenance, workforce retention, and service continuity. These shortcomings are closely linked to leadership deficits, including limited managerial experience, weak decision-making, poor communication, and ineffective stakeholder engagement.

Although some national assessments attribute challenges to regulatory hurdles, procurement inefficiencies, and overreliance on donor funds, deeper inefficiencies appear rooted in leadership and governance gaps. While global and regional studies (e.g., Theophanus, 2020; Daniel & Ugochuku, 2020) acknowledge the role of leadership in project performance, few have examined leadership development as a determinant of PPP healthcare sustainability in Kenya. This creates conceptual and contextual gaps, compounded by methodological limitations in prior research that often overlook project-specific evidence. Addressing these gaps is critical to ensuring sustainable PPP healthcare outcomes at CIHEB and beyond.

2. Literature Review

2.1 Theoretical Review

The sustainability of healthcare Public–Private Partnerships (PPPs) requires not only technical and financial strategies but also behavioral and social mechanisms that shape leadership practices. Two theoretical lenses—Ajzen's Theory of Planned Behavior (TPB) and Bandura's Social Learning Theory (SLT)—offer valuable, complementary insights into how leadership development influences the sustainability of PPP projects. Together, they provide a multidimensional perspective that integrates intention, perception, and modeling into the study of leadership within complex, multi-stakeholder environments.

The TPB explains behavior through attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). Applied to PPP healthcare projects, it highlights how project leaders' beliefs about sustainability influence their decisions, how social expectations from donors or communities guide their actions, and how institutional barriers constrain or enable their capacity to implement sustainable practices. This framing advances PPP research in Kenya, where most studies have emphasized financial or regulatory challenges but rarely examined the psychological and behavioral dynamics underlying leadership decisions. For example, leaders at CIHEB may value long-term sustainability (attitude) yet face pressure from donors to deliver short-term results (subjective norms), while lacking the autonomy to redirect resources (perceived control). Such insights explain why even capable leaders may struggle to achieve sustainable outcomes.

Yet TPB has limitations. It assumes rational, intention-driven action and may overlook cultural, emotional, and political dynamics that dominate Kenyan healthcare contexts (Oleg, 2022). Political interference or entrenched hierarchies can override personal intentions, reducing TPB's predictive utility in volatile environments. This is where SLT adds explanatory depth.

Bandura's SLT (1977) posits that behaviors are learned through observation, imitation, and reinforcement. In PPP healthcare projects, leaders model behaviors—such as transparent communication, collaborative decision-making, or innovative problem-solving—that stakeholders emulate. Peer learning across counties, benchmarking visits, and mentorship schemes demonstrate SLT's practical application in Kenya's healthcare system (Yu, 2017). A county health officer observing successful procurement practices in another region may adopt similar strategies, thereby strengthening sustainability. Reciprocal determinism—where personal factors, behaviors, and environmental feedback reinforce one another—illustrates how individual leadership can trigger system-wide transformation.

Critically, SLT helps address TPB's weaknesses by recognizing non-rational and socially mediated pathways of behavior. Leaders may not act solely from intention but from modeled practices reinforced by institutional recognition. For example, transformational leaders in Kenyan PPPs inspire peers and subordinates to prioritize sustainability, even when structural barriers persist. Conversely, the absence of role models or enabling environments constrains the application of learned practices, exposing SLT's own limitation: the assumption

that observation always translates to action (Thomas, 2022). Structural barriers such as bureaucratic bottlenecks may prevent replication of successful models despite strong peer influence.

Synthesizing TPB and SLT allows for a richer understanding of leadership development in PPPs. TPB clarifies why leaders intend—or fail—to act sustainably, while SLT shows how behaviors are reinforced and diffused through observation and interaction. Together, they highlight that sustainable PPP leadership is not merely about individual intention or institutional structure, but about the interplay of psychological drivers, social influence, and modeled behaviors. This theoretical integration is particularly relevant for CIHEB's projects in Nairobi, where sustainability challenges reflect both constrained decision-making autonomy and weak diffusion of best practices across leadership networks.

Ultimately, applying TPB and SLT situates leadership development as a behavioral and social process, not just a managerial one. Training programs, mentorship, peer-learning platforms, and stakeholder engagement strategies become critical leadership development tools, ensuring that leaders not only intend to pursue sustainability but also learn, model, and reinforce behaviors that drive long-term success in PPP healthcare projects.

2.2 Empirical review

2.2.1 Leadership Development and Sustainability of Healthcare Projects

Leadership development is increasingly recognized as a cornerstone of sustaining healthcare projects implemented through public-private partnerships (PPPs). Central to this development are coaching, mentorship, and formal training programs, which enhance managerial competencies, adaptability, and long-term organizational stability (Alsharif et al., 2021). The sustainability of healthcare PPPs depends not only on financial and infrastructural investments but also on the quality of leadership guiding decision-making and project execution.

2.2.2 Coaching and Healthcare Sustainability

Evidence from India highlights the transformative role of coaching in strengthening leadership capacity within PPP-based healthcare systems. Through the National Health Mission (NHM), structured leadership coaching has improved managerial decision-making and operational efficiency (Kumar & Sharma, 2021). PPP hospitals that actively invested in coaching reported service delivery efficiency 25% higher than their counterparts without structured coaching (Patel & Desai, 2024). Similarly, Singh and Gupta (2022) demonstrate that coaching interventions reduced patient wait times by 30%, underscoring their contribution to sustainability.

These findings resonate with broader international experiences. The World Health Organization (WHO, 2023) underscores coaching as a critical leadership strategy in building resilient health systems, particularly in low- and middle-income countries (LMICs). Coaching equips leaders with adaptive decision-making skills, enabling them to balance stakeholder interests while mitigating systemic challenges such as resource scarcity and policy shifts.

2.2.3 Mentorship as a Vehicle for Knowledge Transfer

Mentorship enhances sustainability by ensuring institutional continuity, knowledge transfer, and leadership succession. In Brazil, structured mentorship programs in São Paulo's PPP health partnerships increased project completion rates by 20% while enhancing healthcare worker retention by 35% (Santos & Oliveira, 2023). These improvements highlight how mentorship not only strengthens leadership capacity but also reduces turnover-based inefficiencies.

Similarly, Nigeria's PPP sector emphasizes mentorship to embed institutional knowledge and transfer best practices across generations of healthcare leaders (Adesuyi et al., 2021). By reducing leadership disruptions during transitions, mentorship safeguards the continuity of service delivery and fosters innovation (Oluyombo et al., 2022). Comparable trends are reported in South Africa, where mentorship enhanced resilience among senior healthcare managers navigating resource constraints (Lawal et al., 2024).

Critically, however, mentorship can be undermined by structural weaknesses such as inadequate institutional frameworks or lack of incentives for senior professionals to mentor. As **OECD (2021)** notes, sustainability requires embedding mentorship into organizational culture rather than treating it as an ad hoc intervention.

2.2.4 Formal Training and Institutional Strengthening

Formal leadership training has also demonstrated strong impact on the sustainability of healthcare PPPs. In Germany, training programs under the Federal Ministry of Health improved financial sustainability and service delivery efficiency by 30% (Muller & Schmidt, 2022). Training was also linked to better compliance with

healthcare laws and improved patient satisfaction (Becker & Hoffmann, 2023).

Across Africa, formal training remains a critical lever for strengthening managerial capacity. In Ghana, training in financial management and strategic planning empowered healthcare leaders to negotiate better PPP agreements and enhance institutional capacity (Donkor, 2021). In Kenya, structured training provided through the Kenya School of Government significantly enhanced governance and budgeting processes in PPP hospitals (Bunde, 2022). These outcomes echo World Bank (2022) findings that leadership training is central to improving efficiency and accountability in PPPs across LMICs.

However, training initiatives face challenges of scalability and sustainability. Without ongoing refresher programs and continuous learning platforms, initial training gains may erode over time. USAID (2022) argues that sustainable leadership development requires integrating training into continuous professional development frameworks rather than one-off interventions.

2.2.5 Critical Analysis and Synthesis

A comparative analysis of global experiences reveals three main insights. First, coaching enhances adaptive leadership, enabling managers to navigate dynamic policy and financial environments. Second, mentorship supports leadership succession and knowledge continuity, reducing inefficiencies associated with high staff turnover. Third, formal training institutionalizes managerial competence, strengthening governance and strategic decision-making.

Yet, the effectiveness of these approaches is contingent upon systemic enablers such as supportive policy environments, adequate financing, and alignment between public and private sector priorities. For instance, while mentorship in Tanzania facilitated medical training expansion, lack of coordination between stakeholders limited long-term sustainability (Tibandebage & Mackintosh, 2020). Similarly, in Uganda, coaching interventions were effective only where community participation was actively integrated (Kabagenyi et al., 2024).

This synthesis suggests that an integrated model of leadership development—combining coaching, mentorship, and formal training—offers the most sustainable pathway for PPP healthcare projects. Isolated approaches risk fragmentation, while integrated systems create synergies that reinforce both managerial competence and institutional resilience.

3. Methodology

3.1 Research Design

Research design provides the blueprint for combining different elements of a study into a coherent and systematic framework (Asenahabi, 2019). This study adopted a convergent parallel mixed-methods design, which facilitates the simultaneous collection of both quantitative and qualitative data. This approach is particularly suited to investigating the complex relationship between project management leadership and the sustainability of healthcare initiatives implemented through public-private partnerships (PPPs) in Nairobi. Quantitative data allows for measurable insights into leadership practices, while qualitative interviews with key informants provide contextual depth. Merging these two strands strengthens interpretation by offering both statistical patterns and nuanced explanations, thus enabling a more comprehensive understanding of sustainability drivers (Bhana, 2024).

3.2 Target Population

The target population refers to the total group of individuals sharing common characteristics relevant to the study (Willie, 2024). The study focused on 404 staff members at CIHEB-Kenya, whose roles directly influence the sustainability of PPP healthcare projects. This included 8 senior managers responsible for strategic oversight, 24 middle-level managers overseeing operations, and 12 project directors guiding specific health programs. Additionally, 55 team leaders supervised departmental functions, while 105 technical officers and coordinators provided specialized implementation expertise. A further 200 support staff handled administrative, financial, and logistical roles essential for project continuity. Finally, 5 health system consultants were included as key informants. Consultants were deliberately selected because of their independent, systems-level perspectives across multiple PPP projects, which make them well-positioned to evaluate leadership practices, identify structural weaknesses, and recommend sustainability strategies

3.3 Sample Size

A sample is a subset of the population chosen for study purposes (Lakens, 2022). Determining the appropriate size is critical, as it influences reliability and validity (Kang, 2021). Using the Krejcie and Morgan sample size determination table for a population of 404 at a 95% confidence level and 5% margin of error, the recommended sample was 201 respondents.

Sampling Procedures

Sampling procedures define how study participants are selected (Casteel & Bridier, 2021; Stratton, 2021). This study applied stratified random sampling to ensure proportional representation across organizational roles. The population was divided into strata based on responsibilities—senior management, project directors, team leaders, technical officers, and support staff—after which probability proportionate sampling was used to select participants from each group. Within each stratum, simple random sampling ensured equal chances of selection.

The stratified sample included 4 senior managers, 12 middle-level managers, 6 project directors, 27 team leaders, 52 technical officers, and 100 support staff, totaling 201 participants (Ministry of Health, PPP Unit, 2024). In addition, purposive sampling was applied to select two health system consultants as key informants, given their expertise and strategic insights into PPP healthcare leadership and sustainability.

3.4 Data Collection Instruments

Data collection tools are essential for obtaining reliable information aligned with research objectives. This study employed a structured questionnaire for quantitative data and a key interview guide for qualitative insights. The questionnaire gathered background information and measured constructs such as leadership styles, skills, experience, and development, as well as sustainability indicators, using Likert-scale formats for ease of quantification.

The interview guide, directed at health system consultants, comprised semi-structured, open-ended questions. This format ensured flexibility while maintaining alignment with core research themes. The guide was developed based on study objectives and existing literature to elicit rich, contextualized responses.

Pilot Testing, Validity, and Reliability

A pilot study involving 20 respondents at AMREF Health Africa was conducted to refine the tools (Munivrana, Jelaska & Tomljanović, 2022). This process enhanced clarity, validity, and reliability before full-scale deployment.

Validity was assessed at three levels. Content validity was established through expert review of instrument items, measured using the Content Validity Index (CVI) and Content Validity Ratio (CVR), with thresholds based on Lawshe's (1975) method. Construct validity was ensured by grounding items in established leadership and healthcare sustainability frameworks, while face validity was tested through pilot feedback. Reliability, the consistency of measurements, was assessed using Cronbach's alpha. Following general benchmarks, coefficients above 0.7 were deemed acceptable, while values above 0.9 indicated excellent internal consistency (Adeniran, 2019; Kennedy, 2022). Reliability results showed 0.737 for 9 items, which was acceptable.

3.5 Data Collection Procedure

Following institutional and ethical approval from the Catholic University of Eastern Africa (CUEA), NACOSTI, and CIHEB, data collection commenced. Questionnaires were administered electronically or in person, depending on participant availability. Informed consent was obtained, with assurances of confidentiality, anonymity, and voluntary participation. Data was securely stored and systematically cleaned before analysis.

3.6 Data Analysis Techniques

Quantitative data were processed and analyzed using SPSS Version 29.0. Descriptive statistics, including frequencies, percentages, means, and standard deviations, summarized data trends. Inferential statistics, including correlation and multiple regression, were applied to examine the influence of leadership styles, skills, experience, and development on project sustainability. The regression model was specified as:

$$Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\beta4X4+e$$

Where Y represents the sustainability of healthcare projects, and X1–X4 denote leadership styles, skills, experience, and development, respectively. Results were presented in tables and charts for clarity.

Qualitative data were analyzed thematically. Transcribed responses were coded, categorized into themes, and interpreted within the Nairobi healthcare context. Integration of both datasets through triangulation provided a nuanced, holistic understanding of the research problem.

3.7 Ethical Considerations

Ethical compliance was prioritized throughout the study. Participants provided informed consent after being briefed on study aims, procedures, and potential risks. Autonomy, dignity, and confidentiality were safeguarded, with data securely stored in encrypted files and locked cabinets accessible only to the research team. Participation was voluntary, with the right to withdraw at any stage. The study adhered to principles of honesty, integrity, and

respect for participants, with measures taken to minimize discomfort or harm. Following completion, data was destroyed to ensure confidentiality.

4. Results and Discussion

1.1Response Rate

The study achieved an excellent response rate of 89.6%, with 180 out of 201 questionnaires returned, complemented by the two scheduled Key Informant Interviews (KIIs). According to Bolarinwa (2021), a response rate above 80% is highly reliable, thus ensuring validity and generalizability of the findings. The high participation was attributed to effective follow-up strategies, appropriate timing, and the professional relevance of the study. Ethical safeguards—including informed consent, confidentiality, and presentation of a research permit—further reinforced participation. The 21 non-responses (10.4%) were likely due to limited availability or disinterest.

Table 1: Response Rate

Data Collection Method	Administered	Returned (%)	Not Returned (%)
Structured Questionnaires	201	180 (89.6%)	21 (10.4%)
Key Informant Interviews (KIIs)	2	2 (100%)	-

Source: Field data, 2025

4.2 Demographic Characteristics

Variable	**Frequency**	**Percentage (%)**
Gender		
Female	106	58.9
Male	74	41.1
Years in Healthcare Project Management		
Less than 1 year	14	7.8
1–5 years	90	50.0
6–10 years	52	28.9
Above 10 years	24	13.3
Level of Education		
Diploma	33	18.3
Undergraduate	102	56.7
Master's Degree	36	20.0
PhD	9	5.0

Source: Field data, 2025

The results indicated that females (58.9%) were the majority, echoing findings in Sub-Saharan Africa where women dominate frontline and middle-level healthcare project management (Kahsay et al., 2021). Their collaborative leadership style fosters inclusiveness and community participation, enhancing sustainability (Agyemang et al., 2022).

In terms of experience, most respondents had 1–5 years (50%) of healthcare project management exposure, followed by 6–10 years (28.9%). This suggests a relatively early-career professional profile but with sufficient familiarity to provide credible insights. Experience fosters foresight, adaptability, and institutional maturity—qualities critical for PPP sustainability (Kebede et al., 2020).

Education levels showed that 56.7% held undergraduate degrees, with 20% having master's, 18.3% diplomas, and 5% PhDs. Higher education correlates with greater

capacity in project planning, evidence-based practice, and multi-sectoral collaboration (Nguyen et al., 2021; Ochieng & Wanyoike, 2023).

4.3 Leadership Development

Leadership development was measured using indicators of coaching, mentorship, and formal training. Respondents rated their level of agreement on a five-point Likert scale ranging from *Strongly Disagree (1)* to *Strongly Agree (5)*.

Statement	SD	D	M	A	SA	Mean	Std. Dev
Project leaders occasionally underestimate the value of experience in decision-making.	0 (0.0%)	2 (1.1%)	15 (8.3%)	118 (65.6%)	45 (25.0%)	4.14	0.509
Leaders regularly receive coaching to enhance their management skills.	1 (0.6%)	2 (1.1%)	70 (38.9%)	77 (42.8%)	30 (16.7%)	3.74	0.765
Formal training is often overlooked in developing leadership capacity.	2 (1.1%)	11 (6.1%)	28 (15.6%)	98 (54.4%)	41 (22.8%)	3.92	0.851
Mentorship is consistently provided to guide emerging leaders.	2 (1.1%)	0 (0.0%)	59 (32.8%)	92 (51.1%)	27 (15.0%)	3.79	0.732
Project leaders rarely benefit from structured leadership development programs.	10 (5.6%)	52 (28.9%)	65 (36.1%)	37 (20.6%)	16 (8.9%)	2.98	1.008
Managers sometimes neglect to support others through mentorship.	1 (0.6%)	26 (14.4%)	53 (29.4%)	78 (43.3%)	22 (12.2%)	3.52	0.906
Supervisors usually attend workshops to strengthen leadership competencies.	1 (0.6%)	2 (1.1%)	43 (23.9%)	108 (60.0%)	26 (14.4%)	3.87	0.680
Coaching opportunities are seldom made available to team leaders.	0 (0.0%)	13 (7.2%)	54 (30.0%)	91 (50.6%)	22 (12.2%)	3.68	0.781
Senior leaders often mentor junior staff to build future capacity.	0 (0.0%)	1 (0.6%)	15 (8.3%)	107 (59.4%)	57 (31.7%)	4.22	0.612
Composite Mean and Std. Dev.	–	–	–	–	–	**3.76**	**0.446**

Source: Field data (2025)

The results indicate that leadership development practices significantly influence the sustainability of PPP healthcare projects at CIHEB (M = 3.76, SD = 0.446). The high mean scores (above 3.0) and relatively low variability (SD < 1.0) show consensus among respondents.

The highest-rated aspect was mentorship from senior leaders (M = 4.22, SD = 0.612), underscoring the importance of intergenerational knowledge transfer in healthcare leadership. Respondents also strongly valued experiential learning, as project leaders were perceived to rarely underestimate the role of experience in decision-making (M = 4.14, SD = 0.509). Formal training (M = 3.92, SD = 0.851) and supervisor participation in workshops (M = 3.87, SD = 0.680) were also reported as common practices. A female key informant confirmed: *"…We're encouraged to shadow our seniors and participate in workshops, which really strengthens our leadership pipeline…"* (KII_03, Female). These findings align with Wamuyu et al. (2023), who emphasized that structured coaching and continuous leadership training enhance program outcomes in healthcare systems.

Despite these positive practices, some gaps were identified. Project leaders rarely benefited from structured leadership programs (M = 2.98, SD = 1.008), suggesting a lack of institutionalized frameworks. Coaching was also inconsistent, with leaders receiving it irregularly across departments (M = 3.74, SD = 0.765). One male respondent noted: *"…While some departments have regular coaching sessions, others rely entirely on self-initiative. There's no standard approach…"* (KII_01, Male). These shortcomings reflect concerns raised by Osei and Boateng (2021), who argue that uneven implementation of coaching and mentorship undermines sustainability and retention in PPP healthcare projects.

Taken together, the findings suggest that CIHEB demonstrates strong mentorship and training practices but lacks consistency and structured frameworks for leadership development. Institutionalizing coaching and formal leadership programs could enhance sustainability by ensuring equitable access across departments and creating a standardized leadership pipeline.

5. Conclusion and Recommendations

5.1 Conclusion

The study established that leadership development—through coaching, mentorship, and training—significantly contributes to the sustainability of PPP healthcare projects at CIHEB in Nairobi, Kenya. Mentorship by senior leaders and supervisor participation in workshops emerged as the strongest enablers of sustainability, ensuring knowledge transfer, workforce retention, and continuity of services. Formal training and coaching also play vital roles, but remain inconsistently applied across departments. The absence of structured, standardized leadership programs limits the full realization of PPP sustainability, leading to uneven outcomes across projects. These findings affirm that leadership development is not merely supportive but a central determinant of PPP healthcare sustainability, particularly in resource-constrained contexts such as Kenya.

5.2 Recommendations

Leadership development is pivotal for sustaining effective Public–Private Partnership (PPP) projects in healthcare. This section outlines five strategic interventions—structured leadership programs, strengthened mentorship, enhanced coaching and continuous professional development, equitable access to opportunities, and policy-donor alignment—implemented collaboratively by CIHEB, the Ministry of Health, and development partners.

1. Institutionalize Structured Leadership Development Programs
   What: Develop and implement standardized leadership training, mentorship, and coaching frameworks across all PPP projects.
   Who: CIHEB in collaboration with the Ministry of Health and development partners.
   How: Establish leadership academies or in-house training units, with clear modules tailored to project management and healthcare leadership.
2. Strengthen Mentorship Systems
   What: Formalize mentorship arrangements between senior leaders and junior staff.
   Who: Project directors, senior managers, and HR units within CIHEB.
   How: Create mentorship schedules, monitor progress, and integrate mentorship outcomes into performance appraisals.
3. Enhance Coaching and Continuous Professional Development (CPD)
   What: Ensure regular coaching and CPD for mid-level and emerging leaders.
   Who: CIHEB leadership, county health managers, and professional associations.
   How: Integrate CPD into project budgets and partner with local universities and professional bodies for certification programs.
4. Promote Equity in Leadership Development Opportunities
   What: Guarantee equal access to training, mentorship, and coaching across all departments.
   Who: CIHEB management and county health departments.
   How: Conduct periodic audits of leadership development participation and address disparities.
5. Policy and Donor Support
   What: Align leadership development with national health strategies and donor funding requirements.
   Who: Ministry of Health, National Treasury, and donor agencies.
   How: Mainstream leadership capacity-building into PPP regulatory frameworks and funding agreements.

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