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The Influence of Leadership Styles on Employee Performance in the Zambian Public Health Sector

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Abstract

Leadership effectiveness is a critical determinant of employee performance in public health institutions, particularly in resource-constrained contexts such as Zambia, where challenges in staff motivation, accountability, and service delivery persist. This study examined the influence of leadership styles on employee performance in the Zambian public health sector, focusing on the Lusaka District Health Office (LDHO), with specific emphasis on transformational, transactional, and participative leadership styles and the mediating role of employee motivation. Guided by a positivist philosophy, the study adopted a quantitative, cross-sectional, descriptive, and correlational design, with data collected through a structured questionnaire grounded in the Full Range Leadership Theory and Herzberg's Two-Factor Theory. Using stratified random sampling, 314 valid responses were obtained from a target of 378 employees across clinical, administrative, managerial, and support staff. Data were analysed using SPSS version 26 through descriptive statistics, Pearson correlation, hierarchical multiple regression, and mediation analysis based on the Baron and Kenny framework supported by the Sobel test. The findings revealed that participative and transactional leadership styles

had significant positive effects on employee performance, while transformational leadership did not exhibit a statistically significant direct influence in the final model. Leadership styles collectively explained 41.1% of the variance in employee performance ($R^2 = 0.411$, $p < 0.001$), indicating moderate explanatory power. Employee motivation emerged as the strongest predictor of performance and significantly mediated the relationship between leadership styles and employee performance, confirming both direct and indirect pathways of influence. The study concludes that leadership approaches emphasising employee involvement, shared decision-making, and structured accountability are more effective in enhancing performance in the LDHO context than purely inspirational approaches. It contributes to theory by providing context-specific evidence on leadership–motivation–performance dynamics within Zambia's decentralised public health system and offers practical implications for strengthening leadership development and performance management. However, the cross-sectional design limits causal inference, and the findings should be interpreted as associative rather than causal.

Keywords: Leadership Styles, Employee Performance, Employee Motivation, Public Health Sector, Lusaka District Health Office

Introduction

Background

Leadership in healthcare has emerged as a critical determinant of organisational performance, staff engagement, and quality service delivery, particularly in developing countries such as Zambia where health systems operate under significant resource constraints. Globally, effective leadership has been associated with improved job satisfaction, organisational commitment, and enhanced healthcare outcomes, with transformational leadership in particular linked to positive workforce behaviours and institutional performance (Alshahrani *et al.*, 2021; World Health Organization, 2023) [1, 22]. Evidence from developed countries such as Canada and Sweden further demonstrates that strong leadership practices contribute to improved staff retention and service efficiency (Boamah *et al.*, 2018; OECD, 2022) [4, 18]. However, these findings are not always directly transferable to developing contexts due to differences in institutional capacity, governance structures, and resource availability.

In sub-Saharan Africa, health systems continue to face persistent challenges related to weak leadership capacity, limited professional development opportunities, and inadequate governance frameworks, which constrain effective service delivery (African Union, 2020; Kibanja & Munene, 2020^[10]; Nzinga *et al.*, 2021^[17]; WHO, 2023^[22]). Empirical evidence from countries such as Uganda and Kenya shows that leadership styles, particularly transactional and participative approaches, can improve employee efficiency, morale, and accountability when appropriately applied within healthcare settings (Kibanja & Munene, 2020; Wambua, 2022)^[10, 20]. Despite these insights, contextual differences across countries necessitate country-specific investigations to better understand how leadership influences employee performance within unique institutional environments.

In Zambia, the Ministry of Health operates within a decentralised system in which district health offices, such as the Lusaka District Health Office (LDHO), play a central role in policy implementation, supervision, and resource management (MoH, 2022; WHO, 2023)^[11, 22]. Zambia has made efforts to strengthen healthcare delivery; however, the sector continues to face persistent challenges, including chronic understaffing, high attrition rates, and inconsistent leadership capacity across districts (MoH, 2022^[11]; ZamStats, 2023). The LDHO supervises approximately 68 health facilities and manages a workforce of about 6,800 employees, yet the national health worker-to-population ratio remains significantly below recommended global standards at 7.6 per 10,000 compared to the WHO benchmark of 23 per 10,000 (MoH, 2023^[12]; WHO, 2023^[22]; ZamStats, 2023). These constraints place considerable pressure on leadership effectiveness at the district level.

Despite the recognised importance of leadership, many leadership positions within Zambia's public health sector are filled based on seniority and technical qualifications rather than formal leadership training, resulting in gaps in strategic planning, staff engagement, and performance management (Kalaba, 2021; Chirwa *et al.*, 2020)^[9, 5]. Empirical evidence suggests that weak leadership practices contribute to low staff morale, high burnout, and inefficiencies in service delivery, thereby undermining overall healthcare outcomes (Banda & Kasonde, 2018)^[3]. While global and regional studies highlight the importance of leadership in influencing employee performance, there remains limited context-specific empirical evidence within Zambia, particularly at the district level. This underscores the need for further investigation into how different leadership styles influence employee performance within the Zambian public health sector.

Statement of the Problem

The Lusaka District Health Office (LDHO) operates within a highly constrained environment characterised by a significant imbalance between service demand and available human resources, serving over 2.7 million people—approximately 14% of Zambia's population—while functioning with only about 60% of the required workforce (ZamStats, 2023). This structural deficit places considerable pressure on leadership at the district level to ensure efficiency, accountability, and quality service delivery. However, leadership roles within the Zambian public health system are often assigned based on seniority and professional qualifications rather than formal leadership

training or managerial competence, resulting in critical gaps in strategic planning, participatory governance, and staff motivation (MoH, 2022; Kalaba, 2021; Chirwa *et al.*, 2020)^[11, 9, 5]. Empirical evidence suggests that these leadership deficiencies contribute to weak supervision, limited staff engagement, and inconsistent performance management systems, ultimately undermining organisational effectiveness. Furthermore, although facilities with structured leadership practices have demonstrated improved staff morale and service outcomes, such practices are not consistently institutionalised across districts, highlighting systemic weaknesses in leadership capacity (Banda & Kasonde, 2018)^[3].

Despite growing recognition of leadership as a key driver of employee performance, the Zambian health sector continues to experience persistent performance challenges linked to ineffective leadership practices, particularly at the district level (MoHZ, 2022; ZamStats, 2023). At the LDHO, issues such as limited staff involvement in decision-making, weak communication systems, and inadequate supervisory recognition have been reported to negatively affect employee motivation and performance (Chirwa *et al.*, 2020; Kalaba, 2021)^[5, 9]. Although internal reports indicate that leadership-related concerns account for a substantial proportion of staff dissatisfaction, existing evidence remains largely descriptive and does not adequately explain how specific leadership styles influence measurable performance outcomes. Additionally, high levels of staff burnout—estimated at approximately 43% in urban health facilities—point to deeper organisational and leadership challenges, yet these outcomes cannot be fully attributed to leadership without isolating its specific effects (Ministry of Health, 2023)^[12]. More critically, current empirical literature in Zambia is fragmented and lacks rigorous, context-specific analysis of how different leadership styles interact with employee motivation to shape performance outcomes, particularly in high-demand urban districts such as Lusaka. This creates a clear empirical and methodological gap, necessitating a systematic investigation into the influence of leadership styles on employee performance within the LDHO to inform evidence-based leadership development and performance management interventions.

Research Objectives

The primary objective of this study was to examine the influence of leadership styles on employee performance in the Zambian public health sector, using the Lusaka District Health Office (LDHO) as a case study. Specific objectives of the study were to:

1. To examine the influence of leadership styles on employee performance at the LDHO.
2. To assess the role of employee motivation as a predictor of employee performance at the LDHO.
3. To determine the mediating effect of employee motivation on the relationship between leadership styles and employee performance at the LDHO.

Literature Review

Leadership Styles, Employee Performance, and Motivation

Leadership styles represent observable behavioural patterns through which leaders influence employee attitudes, engagement, and performance outcomes within organisations. Contemporary literature identifies transformational, transactional, and participative leadership

as dominant approaches, each shaping employee performance through both direct behavioural influence and indirect psychological mechanisms such as motivation and commitment (Hoch *et al.*, 2018; Liden *et al.*, 2020; Thanh, 2022). Transformational leadership focuses on inspiration, vision, and intellectual stimulation, encouraging employees to align personal and organisational goals, while transactional leadership emphasises structure, role clarity, and performance-based rewards to ensure efficiency and compliance (Bass & Riggio, 2006; Ng, 2019; Northouse, 2022^[15]). Participative leadership promotes shared decision-making and collaboration, enhancing employee ownership and accountability (Puni *et al.*, 2021). However, emerging evidence challenges the assumption of the universal superiority of transformational leadership, suggesting that in bureaucratic and resource-constrained environments such as public health systems, transactional and participative leadership styles may be more effective due to their emphasis on coordination, accountability, and inclusiveness (Van Wart *et al.*, 2019; Thanh, 2022). This underscores the importance of contextualising leadership effectiveness within institutional realities rather than applying universal models.

Employee motivation, defined as the internal psychological processes that determine the direction, intensity, and persistence of effort, plays a critical mediating role in the leadership–performance relationship. It is influenced by both intrinsic factors, such as recognition and personal growth, and extrinsic factors, including supervision, rewards, and organisational policies (Ryan & Deci, 2020; Steers *et al.*, 2019). Within organisational contexts, particularly in resource-constrained public sector environments, motivation becomes a key driver of performance as non-monetary incentives play a central role in shaping employee behaviour. Leadership styles influence motivation by affecting employees' perceptions of fairness, autonomy, and support; for example, participative leadership enhances intrinsic motivation through involvement, while transactional leadership reinforces extrinsic motivation through structured rewards, and transformational leadership aligns employee values with organisational goals (Hoch *et al.*, 2018; Ng, 2019). Despite its importance, existing literature often treats motivation as an outcome rather than a mediating mechanism, limiting understanding of how leadership translates into performance. Recent studies advocate for mediation-based approaches, highlighting that leadership effects on performance are largely indirect and operate through motivational pathways, yet such analyses remain limited in developing-country public sector contexts, including Zambia.

Theoretical Framework

This study is anchored on the Full Range Leadership Theory (FRLT) developed by Bass and Avolio (1994). This theory provides a robust foundation for explaining how leadership styles influence employee performance directly and indirectly through employee motivation within public sector organisations such as the Lusaka District Health Office (LDHO).

The Full Range Leadership Theory conceptualises leadership as a continuum comprising transformational, transactional, and laissez-faire leadership styles. In the context of this study, emphasis is placed on transformational

leadership (TLS), transactional leadership (TRS), and participative leadership (PLS) as the dominant leadership styles observable within the LDHO. Transformational leadership focuses on inspiring employees, fostering innovation, and aligning individual goals with organisational objectives. Transactional leadership emphasises task structure, performance monitoring, and the use of rewards or sanctions to achieve desired outcomes. Participative leadership, although not explicitly classified within the original FRLT, aligns closely with its democratic and empowering dimensions and is highly relevant in decentralised public health systems where shared decision-making and teamwork are essential for service delivery. FRLT therefore provides a theoretical lens through which leadership behaviours are expected to influence employee performance outcomes.

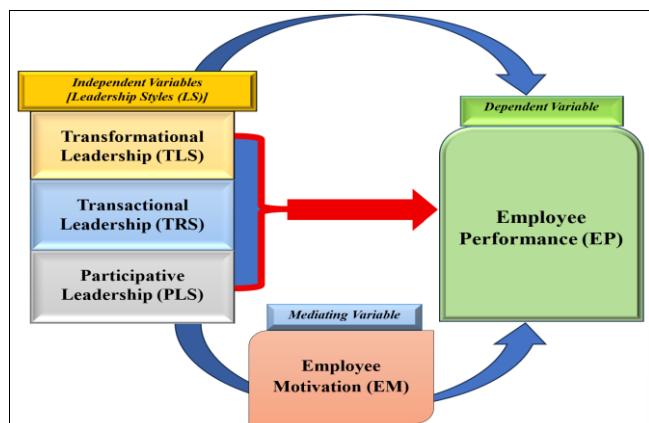
To explain the mechanism through which leadership styles affect employee performance, the study draws on Herzberg's Two-Factor Theory, which distinguishes between motivators (such as recognition, responsibility, and achievement) and hygiene factors (such as supervision, organisational policies, and working conditions). Within this framework, employee motivation (EM) is conceptualized as a mediating variable linking leadership styles to employee performance. Leadership styles that promote recognition, involvement, accountability, and supportive supervision are expected to enhance employee motivation, which in turn improves performance outcomes such as task completion, accountability, service quality, and overall job effectiveness. By integrating FRLT and Herzberg's Two-Factor Theory, this study proposes that leadership styles exert both direct effects on employee performance and indirect effects through employee motivation. This combined theoretical framework is appropriate for testing the study's hypotheses using quantitative methods and supports the examination of mediation effects within a public health organisational context. The framework therefore provides a comprehensive theoretical basis for understanding how leadership behaviour translates into performance outcomes at the Lusaka District Health Office, while contributing to leadership and motivation theory in developing-country healthcare settings.

Conceptual Framework

The conceptual framework of this study is grounded in Bass and Avolio's (1994) Full Range Leadership Theory (FRLT) and Herzberg's Two-Factor Theory (1959), which together explain how leadership behaviors affect employee motivation and performance. FRLT identifies three key leadership dimensions—transformational, transactional, and laissez-faire—but this study adapts the model by focusing on transformational, transactional, and participative leadership styles as relevant predictors of employee performance within the LDHO. These styles represent the spectrum of leadership behaviors evident in Zambia's health institutions, where effective leadership is critical for aligning staff efforts toward achieving service delivery goals in resource-constrained settings.

Transformational leaders inspire and intellectually stimulate employees, fostering commitment and innovation. Transactional leaders provide structure and rewards for achieving performance targets, ensuring accountability and operational control. Participative leaders promote teamwork and inclusiveness, enhancing morale and collective

problem-solving. The framework specifies both direct and indirect relationships among variables. Leadership styles directly influence employee performance, while indirect effects occur through employee motivation. These relationships align with the study hypotheses, where leadership styles are the independent variables, employee motivation is the mediator, and employee performance is the dependent variable. By integrating FRLT and Herzberg's theory, the framework provides a clear basis for examining how leadership influences performance both directly and through motivation within the LDHO.



Source: Author, 2026

Fig 1: Conceptual Framework

Reviewed Literature

The pioneering work of Bass and Avolio (1994) laid the foundation for understanding transformational leadership by exploring its impact on organisational innovation and productivity. Their longitudinal study of Fortune 500 companies utilised the Multifactor Leadership Questionnaire (MLQ) to survey over 500 participants, concluding that transformational leaders significantly enhance employee motivation and performance by fostering vision, inspiration, and intellectual stimulation. While this study remains foundational in leadership theory, its corporate and high-resource setting presents limitations when applying its findings to public sector contexts in developing countries. More recently, Alshahrani *et al.* (2021) [1] advanced this discourse by empirically testing transformational leadership in a healthcare environment—specifically within hospitals in Saudi Arabia. Using a cross-sectional survey of 280 healthcare employees, they demonstrated that transformational leadership positively influenced job satisfaction, organisational commitment, and overall staff morale. Their findings underscore the relevance of leadership behaviours in healthcare systems that, although better resourced than Zambia's, still contend with bureaucratic structures and hierarchical management. The current study builds on these insights by investigating the extent to which transformational and other leadership styles influence employee performance in Zambia's Lusaka District Health Office, a resource-constrained public health institution. Unlike earlier corporate-focused research, this study applies leadership theories in a setting where staff shortages, policy rigidity, and limited supervisory capacity demand context-specific leadership approaches to drive employee engagement and service quality.

Building upon the foundational insights of Judge and Piccolo (2021) [8] conducted a robust meta-analysis to

compare the effectiveness of transformational and transactional leadership styles across organisational settings. Their analysis drew from 87 empirical studies encompassing a cumulative sample of over 21,000 participants. The findings reinforced the notion that transformational leadership has a significantly stronger positive influence on employee motivation, satisfaction, and performance compared to transactional leadership. While this study adds substantial empirical weight to the argument for transformational leadership, its conclusions are largely derived from Western, corporate, and profit-oriented environments. These settings often differ markedly from the realities faced in public health institutions in developing countries such as Zambia. In Zambia's district-level healthcare system—particularly at the Lusaka District Health Office—leadership challenges are compounded by bureaucratic constraints, limited autonomy, and acute resource shortages. As such, while the Judge and Piccolo study confirms the global validity of transformational leadership outcomes, the present research aims to examine whether these effects translate meaningfully within the context of a low-resource, high-demand public health setting. This contextual adaptation is vital to generating practical, evidence-based leadership strategies that can be implemented in Zambia's healthcare governance.

From the local perspective, Banda and Kasonde (2018) [3] conducted a case study across three districts in Zambia to investigate the role of leadership in public health planning. Their findings revealed that weak leadership was a significant factor contributing to poor planning outcomes, including delays in project implementation and inefficiencies in resource utilisation. While the study effectively highlighted the critical influence of leadership on public health systems, it fell short in classifying or analysing the specific leadership styles responsible for these outcomes. In the context of this study, the researcher recognises that understanding *how* different leadership styles impact employee performance is essential for developing targeted interventions in the healthcare sector. By focusing specifically on the Lusaka District Health Office and employing both quantitative and qualitative methods, the current study moves beyond Banda and Kasonde's general leadership critique to offer a nuanced evaluation of transformational, transactional, and participative leadership styles. This approach aims to generate actionable insights that can strengthen health workforce engagement and service delivery within Zambia's district health systems.

Kalaba (2021) [9] conducted a qualitative study involving 15 in-depth interviews to examine leadership challenges within Lusaka's health sector. The findings identified poor supervision, inadequate delegation, and ineffective communication as central barriers to organisational efficiency and staff motivation. While the study provided valuable context-specific insights, its limited scope and purely qualitative approach restrict the generalisability of the results. In the context of this study, the researcher acknowledges Kalaba's contribution but emphasises the need for a broader, mixed-methods investigation that can quantify the prevalence of these leadership challenges and link them directly to employee performance outcomes. By integrating structured surveys and key informant interviews, the current study will offer a more robust understanding of how specific leadership styles—transformational, transactional, and participative—affect staff performance at

the Lusaka District Health Office. This comprehensive approach addresses the methodological limitations in Kalaba's study and ensures more policy-relevant conclusions for improving healthcare leadership in Zambia. The reviewed literature demonstrates that leadership styles such as transformational, transactional, and participative play a crucial role in shaping employee performance across diverse contexts. Globally, most studies (Piccolo, 2021; Boamah *et al.*, 2018^[4]) have been conducted in corporate or high-resource healthcare systems, limiting their applicability to low-resource environments such as Zambia. Regionally, research in East Africa (Kibanja & Munene, 2020; Wambua, 2022; Nzinga *et al.*, 2021)^[10, 20, 17] highlights the importance of inclusive leadership but often focuses on governance structures rather than behavioural leadership styles. Locally, studies in Zambia (Banda & Kasonde, 2018^[3]; Kalaba, 2021^[9]; Chirwa *et al.*, 2020^[5]; Zozie & Daka, 2024) reveal leadership challenges in both rural and urban settings but tend to lack comparative analysis of leadership styles and their direct impact on measurable employee performance indicators.

This reveals a clear knowledge gap; while the influence of leadership on organisational outcomes is well-documented, little is known about how specific leadership styles affect employee performance in Zambia's urban district health offices, which operate under conditions of chronic resource shortages, high service demand, and bureaucratic complexity. Furthermore, there is limited empirical evidence using mixed methods approaches that combine quantitative and qualitative data to provide a holistic understanding of leadership in this context.

This study therefore seeks to fill this gap by examining the influence of transformational, transactional, participative, and autocratic leadership styles on employee performance at the LDHO. By integrating both survey and interview data, it will contribute new knowledge that not only contextualises global leadership theories within Zambia's health sector but also provides practical insights for leadership development and policy interventions in similar low-resource urban health systems.

Research Methodology

The study employed a quantitative, cross-sectional correlational research design to examine how leadership styles influence employee performance at the Lusaka District Health Office (LDHO). As a cross-sectional study, data was collected from respondents at a single point in time, allowing the researcher to capture an accurate snapshot of existing leadership behaviours, employee motivation, and performance outcomes within the institution (Creswell & Creswell, 2018)^[6]. This design was appropriate for assessing organisational dynamics without manipulating variables or observing changes over an extended period.

The research group comprised all employees working under the LDHO, which included management staff, departmental heads, health facility in-charges, clinical personnel, administrative officers, and support staff. This population was considered appropriate because it reflected the full spectrum of leadership interactions and employee performance experiences within a large, urban public health administration. According to internal LDHO staffing records (2023), the district oversaw approximately 6,800 employees across 68 health facilities, making it a representative setting for examining leadership dynamics in Zambia's public

health sector.

To obtain a representative sample from this population, the study employed a probability-based sampling strategy. A sample size of $n = 378$ respondents was determined using Yamane's (1967) formula for finite populations at a 95% confidence level and a 5% margin of error. Simple random sampling was used to select participants from various departments and facilities to ensure that all cadres of staff had an equal chance of being included. This approach helped minimise sampling bias and enhanced the generalisability of the findings to the broader LDHO workforce.

A probability sampling approach was employed to ensure that every member of the target population had an equal and independent chance of selection, thereby enhancing the objectivity and generalizability of the findings. Specifically, simple random sampling was used to draw participants from the LDHO employee register. Data for this study were collected using a structured, self-administered questionnaire. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 26, which is widely recommended for quantitative research due to its robustness in handling large datasets and performing advanced statistical procedures (Pallant, 2020). Completed questionnaires were coded and entered into SPSS to ensure accuracy and enable systematic analysis. The analysis began with descriptive statistics—frequencies, percentages, means, and standard deviations—to summarise demographic characteristics and highlight general patterns in perceived leadership styles, employee motivation, and performance levels. Descriptive analysis is essential in quantitative studies as it provides a foundational understanding of the dataset before moving into hypothesis testing (Creswell & Creswell, 2018)^[6].

Inferential statistics were then applied to examine the hypothesised relationships among the study variables. Pearson's correlation coefficient was used to determine the strength and direction of associations between transformational leadership, transactional leadership, employee motivation, and employee performance. Pearson correlation is appropriate for continuous variables measured on Likert scales and helps identify linear relationships (Field, 2018). Multiple regression analysis was employed to assess the predictive influence of transformational and transactional leadership on employee performance, consistent with analytical methods used in leadership-performance research (Hayes, 2018).

Presentation of Findings

This section presents descriptive statistics, correlation analysis, and hierarchical regression results, in line with the study objectives and hypotheses.

Descriptive Statistics

Table 4.1 below shows that employee performance (EPF) recorded a high mean score ($M = 4.141$, $SD = 0.762$) on a five-point scale, indicating generally high levels of performance among respondents. Transformational leadership (TLS) had a moderate mean score ($M = 3.589$, $SD = 1.123$), while transactional leadership (TRS) recorded a slightly lower but comparable mean ($M = 3.536$, $SD = 0.869$). Participative leadership (PLS) exhibited a mean score of 3.601 ($SD = 1.034$), reflecting moderately high perceptions of participative leadership practices. Employee

motivation (EM) also showed a relatively high mean score (M = 3.732, SD = 0.920).

Table 1: Descriptive Statistics

Variable	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
Employee Performance (EPF)	1.00	5.00	4.141	0.762	-1.288	2.448
Transformational Leadership (TLS)	1.00	5.00	3.589	1.123	-0.718	-0.500
Transactional Leadership (TRS)	1.00	5.00	3.536	0.869	-0.575	-0.137
Participative Leadership (PLS)	1.00	5.00	3.601	1.034	-0.813	-0.078
Employee Motivation (EM)	1.25	5.00	3.732	0.920	-0.382	-0.651

Source: Survey Data, 2026

All variables demonstrated negative skewness values, indicating a clustering of responses toward the higher end of the scale, while kurtosis values ranged from slightly platykurtic to leptokurtic, suggesting acceptable distributional properties for subsequent parametric analysis.

Correlation Analysis

Table 2 indicates that employee performance (EPF) is positively and significantly correlated with transformational leadership (r = 0.565, p < 0.01), transactional leadership (r = 0.609, p < 0.01), participative leadership (r = 0.612, p < 0.01), and employee motivation (r = 0.672, p < 0.01). The strongest association with employee performance is observed for employee motivation, followed by participative and transactional leadership. Transformational, transactional, and participative leadership styles are also strongly and positively interrelated, with correlation coefficients ranging from 0.774 to 0.843. Employee motivation exhibits strong positive correlations with all leadership styles, particularly transactional leadership (r = 0.793) and participative leadership (r = 0.772), indicating close relationships among the study variables.

Table 2: Pearson Correlation Matrix of Study Variables (N = 314)

Variable	EPF	TLS	TRS	PLS	EM
Employee Performance (EPF)	1.000				
Transformational Leadership (TLS)	0.565**	1.000			
Transactional Leadership (TRS)	0.609**	0.843**	1.000		
Participative Leadership (PLS)	0.612**	0.774**	0.823**	1.000	
Employee Motivation (EM)	0.672**	0.734**	0.793**	0.772**	1.000

Source: Survey Data, 2026

Multiple Regression Analysis

Table 3 shows the results of hierarchical multiple regression analysis examining the effects of leadership styles and employee motivation on employee performance. In Model 1, which included transformational, transactional, and participative leadership, the model explains 41.1% of the variance in employee performance (R² = 0.411; Adj. R² = 0.405) and is statistically significant (F(3,310) = 72.098, p < 0.001). Transactional leadership (β = 0.266, p = 0.005) and participative leadership (β = 0.322, p < 0.001) are significant positive predictors of employee performance, while transformational leadership does not show a significant effect (β = 0.092, p = 0.273).

In Model 2, employee motivation is added to the regression, increasing the explained variance in employee performance to 47.6% (R² = 0.476; Adj. R² = 0.470), with a significant change in R² (ΔR² = 0.065; F-change(1,309) = 38.577, p < 0.001). Employee motivation emerges as the strongest predictor of employee performance (β = 0.450, p < 0.001). The effects of transactional leadership become non-significant (β = 0.085, p = 0.364), while participative leadership remains significant though reduced in magnitude (β = 0.170, p = 0.032). Transformational leadership remains non-significant after the inclusion of employee motivation (β = 0.032, p = 0.688).

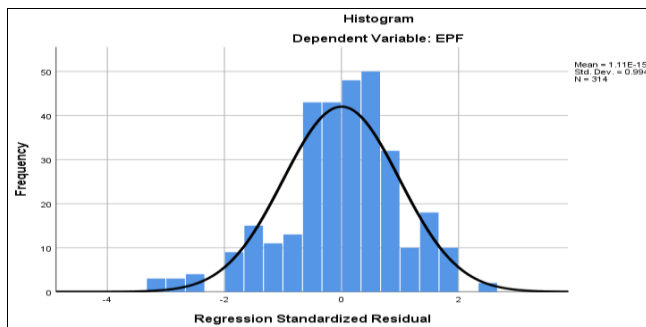
Table 3: Hierarchical Multiple Regression Results

Model	Predictor Variable	B	SE	β	t-stat	P-Value	Interpretation
Model 1	Constant	2.239	0.140	-	15.954	0.000	Intercept significant
	Transformational Leadership (TLS)	0.062	0.057	0.092	1.097	0.273	Not a significant predictor
	Transactional Leadership (TRS)	0.233	0.082	0.266	2.844	0.005	Significant positive effect on EP
	Participative Leadership (PLS)	0.237	0.059	0.322	4.042	0.000	Strong positive predictor of EP
Model Fit Statistics							R ² = .411; Adj. R ² = .405; F(3,310)=72.098, p<.001
Model	Predictor Variable	B	SE	β	t-stat	P-Value	Interpretation
Model 2	Constant	1.960	0.140	-	14.002	0.000	Intercept significant
	Transformational Leadership (TLS)	0.022	0.054	0.032	0.402	0.688	Not significant after EM inclusion
	Transactional Leadership (TRS)	0.074	0.082	0.085	0.909	0.364	Effect reduced and non-significant
	Participative Leadership (PLS)	0.125	0.058	0.170	2.151	0.032	Remains significant but reduced
	Employee Motivation (EM)	0.372	0.060	0.450	6.211	0.000	Strongest predictor of EP
Model Fit Statistics							R ² = 0.476; Adj. R ² = 0.470; ΔR ² = 0.065; F-change (1,309) =38.577, p<0.001

Source: Survey Data, 2026

Multiple Regression Diagnostics

Fig 2 shows that the regression standardized residuals for employee performance (EPF) are approximately normally distributed. The mean of the residuals is effectively zero (Mean = $1.11E-15$), while the standard deviation is close to one (SD = 0.994), which is consistent with the expected properties of standardized residuals. The distribution is symmetric around zero, with most residuals falling within the range of -2 to $+2$ standard deviations and no pronounced extreme outliers. The overlaid normal curve closely fits the histogram bars, indicating minimal deviation from normality. These statistical characteristics confirm that the normality assumption underlying the regression model is satisfied, supporting the reliability of the parameter estimates and subsequent inferential analyses.



Source: Survey Data, 2026

Fig 2: Normality Test

Furthermore, Fig 3 below indicates that the standardized residuals closely follow the expected normal distribution. The plotted points align closely with the 45-degree reference line, with only minor and unsystematic deviations observed, particularly at the lower and upper tails. This pattern suggests that the cumulative observed probabilities correspond well with the expected cumulative probabilities under normality. The absence of pronounced curvature or systematic divergence from the diagonal line indicates that the residuals do not exhibit significant skewness or kurtosis. Overall, the P-P plot confirms that the normality assumption for the regression residuals is satisfactorily met, supporting the validity of the regression model estimates and inferential results.



Source: Survey Data, 2026

Fig 3: P-P Plot of Standardized Residual

Discussion of Findings

This section discusses the influence of leadership styles—TLS, TRS, and PLS—on employee performance at the LDHO. The discussion is guided by the study's first specific

objective and corresponding hypothesis, which sought to examine whether leadership styles significantly influence employee performance. The interpretation draws on the hierarchical regression results presented in Chapter Four and situates the findings within the Full Range Leadership Theory (FRLT) and relevant empirical literature.

Transformational Leadership and Employee Performance

Transformational leadership was examined to determine its influence on employee performance at the LDHO. The regression results indicated that transformational leadership did not have a statistically significant direct effect on employee performance when other leadership styles were controlled for ($\beta = 0.092$, $p = 0.273$ in Model 1), and its effect further diminished after the inclusion of employee motivation in Model 2 ($\beta = 0.032$, $p = 0.688$). This finding suggests that transformational leadership alone does not directly translate into improved performance outcomes within the LDHO context.

This result partially contrasts with the assertions of the Full Range Leadership Theory, which posits transformational leadership as a key driver of superior employee outcomes through inspiration, intellectual stimulation, and individualized consideration (Bass & Avolio, 1994; Northouse, 2022^[15]). Empirical studies such as those of Boamah *et al.* (2018)^[4] as well as Alshahrani *et al.* (2021)^[1] conducted in high-resource healthcare settings have consistently reported positive associations between transformational leadership and employee performance. However, the present finding aligns with studies conducted in resource-constrained public sector environments, where structural limitations, workload pressures, and limited autonomy may weaken the direct performance impact of inspirational leadership behaviours (Nguyen *et al.*, 2022; WHO, 2023)^[14, 22].

In the LDHO context, where staff shortages and operational demands are high, transformational leadership may function more indirectly—primarily by influencing motivation rather than directly shaping task execution or service outcomes. This interpretation is supported by the strong correlation observed between transformational leadership and employee motivation in the study, suggesting that its influence on performance may be mediated rather than direct.

Transactional Leadership and Employee Performance

Transactional leadership demonstrated a statistically significant positive influence on employee performance in Model 1 of the regression analysis ($\beta = 0.266$, $p = 0.005$). This indicates that transactional leadership practices—such as clear task structuring, performance monitoring, and contingent rewards—were effective in enhancing employee performance at the LDHO when considered independently of employee motivation. However, when employee motivation was introduced in Model 2, the effect of transactional leadership became statistically insignificant ($\beta = 0.085$, $p = 0.364$), indicating that its influence on performance operates largely through motivational mechanisms.

This finding aligns closely with FRLT, which recognises transactional leadership as effective in maintaining operational efficiency and compliance, particularly in bureaucratic and rule-driven environments such as public health institutions (Bass & Avolio, 2004; Northouse, 2022^[15]). Empirical studies in sub-Saharan Africa have similarly

shown that transactional leadership improves performance outcomes when supported by supervision and accountability systems (Kibanja & Munene, 2020; Wambua, 2022) ^[10, 20]. In the LDHO setting, transactional leadership appears to provide the structure and clarity necessary for employees to meet performance expectations under constrained conditions. However, the reduction of its effect after controlling for motivation suggests that rewards, sanctions, and monitoring mechanisms influence performance primarily by shaping employee motivation rather than directly driving sustained productivity. This reinforces the importance of integrating transactional practices with motivational strategies to achieve long-term performance improvements.

Participative Leadership and Employee Performance

Participative leadership emerged as the strongest and most consistent predictor of employee performance among the leadership styles examined. In Model 1, participative leadership had a strong positive and statistically significant effect on employee performance ($\beta = 0.322$, $p < 0.001$). Although its effect size reduced after the inclusion of employee motivation in Model 2, it remained statistically significant ($\beta = 0.170$, $p = 0.032$), indicating a robust direct influence on performance outcomes.

This finding strongly supports both the FRLT and contemporary leadership literature, which emphasise the effectiveness of inclusive and collaborative leadership behaviours in enhancing employee engagement, accountability, and task ownership (Northouse, 2022) ^[15]. Participative leadership encourages shared decision-making, open communication, and employee involvement—factors that are particularly critical in complex service environments such as district-level healthcare systems. The result is consistent with regional studies conducted in Kenya and Uganda, which found that participative leadership significantly improved staff morale, accountability, and service responsiveness in public health institutions (Wambua, 2022; Nzinga *et al.*, 2021) ^[20, 17]. Within the LDHO context, participative leadership appears especially effective in compensating for resource constraints by leveraging employee knowledge, fostering commitment, and enhancing collective problem-solving.

Comparative Influence of Leadership Styles

A comparative analysis of the three leadership styles reveals clear differences in their influence on employee performance at the LDHO. The hierarchical regression results indicate that participative leadership (PLS) exerted the strongest direct influence on employee performance, with a standardized coefficient of $\beta = 0.322$ ($p < 0.001$) in Model 1. This suggests that leadership practices characterised by employee involvement, shared decision-making, and collective problem-solving are particularly effective in enhancing performance outcomes within the LDHO. In contrast, transactional leadership (TRS) demonstrated a moderate but statistically significant effect on employee performance ($\beta = 0.266$, $p = 0.005$), indicating that structured supervision, clear expectations, and performance-based rewards also play an important role in driving employee output. Transformational leadership (TLS), however, did not exhibit a statistically significant direct effect on performance ($\beta = 0.092$, $p = 0.273$), suggesting that inspirational and vision-driven leadership

alone may be insufficient to produce measurable performance gains in this context.

These statistical patterns reflect the operational realities of Zambia's decentralised public health system, where service delivery depends heavily on teamwork, procedural compliance, and immediate problem-solving at the district level. Participative leadership aligns closely with decentralisation principles by empowering frontline workers to contribute to decision-making and operational planning, thereby improving ownership, accountability, and responsiveness (World Health Organization [WHO], 2023) ^[22]. Empirical studies in sub-Saharan Africa similarly report that participative and transactional leadership styles are more effective than transformational leadership in resource-constrained public institutions, where employees prioritise clear guidance, inclusion, and tangible support over abstract vision (Wambua, 2022; Nzinga *et al.*, 2021) ^[20, 17]. The weaker performance effect of transformational leadership observed in this study therefore does not negate its theoretical value but rather highlights contextual limitations in environments characterised by staffing shortages, high workloads, and rigid administrative structures.

Collectively, these findings provide robust empirical justification for rejecting the null hypothesis (H_{01}) and accepting the alternative hypothesis (H_{11}), confirming that leadership styles significantly influence employee performance at the LDHO. More importantly, the results demonstrate that participative leadership is the most effective leadership style for enhancing performance, followed by transactional leadership, within Zambia's district-level public health setting. This evidence reinforces the argument that leadership effectiveness is context-dependent and that adaptive, inclusive, and accountability-oriented leadership approaches are better suited.

This highlights the importance of embedding motivation-enhancing strategies—such as recognition systems, participatory work environments, and supportive supervision—into leadership and human resource practices to improve performance outcomes in Zambia's public health sector.

The Full Range Leadership Theory (FRLT) conceptualises transformational leadership as the most effective style for enhancing employee outcomes, with transactional leadership playing a secondary but complementary role (Bass & Avolio, 1994). However, the findings of this study partially challenge this hierarchy. While participative and transactional leadership styles demonstrated significant positive effects on employee performance, transformational leadership did not exhibit a statistically significant direct influence in the LDHO context. This suggests that the effectiveness of leadership styles is context-dependent, and that FRLT may require adaptation when applied to public-sector environments characterised by bureaucratic structures and operational pressures.

The study extends FRLT by highlighting the relevance of participative leadership as a distinct and influential leadership style within the full leadership spectrum. Although participative leadership is often subsumed within transformational behaviours, the empirical evidence from this study indicates that participative leadership independently contributes to performance outcomes more strongly than transformational leadership in decentralised public health institutions. This finding supports recent scholarly calls to broaden FRLT by incorporating

participative decision-making as a core leadership dimension in public-sector and developing-country settings (Northouse, 2022; Alshahrani *et al.*, 2021) ^[15, 1].

The findings of this study have important implications for public health leadership policy and management practice in Zambia. By demonstrating that participative and transactional leadership styles exert stronger direct effects on employee performance than transformational leadership, and that employee motivation plays a critical mediating role, the study provides evidence-based guidance for leadership development, institutional management, and workforce performance enhancement within the public health sector.

Conclusion

The primary aim of this study was to assess how leadership styles influence employee performance at the LDHO, with particular emphasis on transformational, transactional, and participative leadership styles, as well as the mediating role of employee motivation. Based on the empirical findings and discussions, several key conclusions were drawn. First, the study concludes that leadership styles significantly influence employee performance at the LDHO. Regression results revealed that participative leadership emerged as the strongest predictor of employee performance, followed by transactional leadership. Transformational leadership, while positively correlated with performance, did not exhibit a statistically significant direct effect when other leadership styles and employee motivation were accounted for. This suggests that leadership approaches that emphasise shared decision-making, involvement, and structured accountability are more effective in enhancing performance within Zambia's district-level public health institutions.

Recommendations

Based on the study's findings and conclusions, the following recommendations are proposed:

- *Leadership Development Programmes*: The Ministry of Health should institutionalise continuous leadership development programmes that emphasise participative and motivational leadership skills for district-level managers and supervisors.
- *Performance-Oriented Leadership Practices*: Supervisors should balance transactional controls with participative approaches to ensure accountability while fostering collaboration and ownership among employees.
- *Policy Review on Leadership Appointments*: Leadership appointments within the public health sector should incorporate leadership competence and managerial training as key criteria, alongside professional qualifications and experience.

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