

Impact of leadership styles on employee motivation as mediated by organizational culture: A case of healthcare NGO in Zambia

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Abstract

This study aimed to determine the impact of leadership styles on staff motivation in Zambian healthcare non-governmental organizations (NGOs) using organizational culture as a mediator. A quantitative survey with a sample size of 286 employees was undertaken, and multiple regression analysis was utilized to examine the impact of transformational, transactional, democratic, and autocratic leadership styles on employee motivation. Transformational leadership had the strongest positive influence on motivation ($\beta = 1.275$, $p < 0.001$), while transactional leadership negatively affected motivation ($\beta = -0.403$, $p = 0.015$). Organizational culture had an important role in mediating these interactions ($\beta = 0.721$, $p = 0.002$). The study emphasizes the importance of transformational leadership in non-governmental organizations (NGOs) and shows that cultivating a strong organizational culture increases employee engagement. This study makes both theoretical and empirical contributions to the literature on leadership styles and employee motivation, as it is among the few to incorporate organizational culture as a mediating variable in the context of health NGOs in low and middle-income countries. The study's limitation is its inability to be generalized to different populations due to the use of a convenience sample strategy for data collection. For future research, we recommend mixed-method techniques, greater sample sizes, and stratified random sampling to ensure diverse representation and deeper contextual insights.

Keywords: *leadership styles, motivation, health non-governmental organizations, NGO*

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1. Introduction

Although a great deal of study has been done on leadership styles and employee motivation in a variety of industries, little of it has been done expressly to look at these issues in the particular context of healthcare non-governmental organizations (NGOs) in poor nations such as Zambia. Healthcare NGOs frequently work in difficult settings with little resources and complicated healthcare problems (Doshmangir et al., 2025). The work atmosphere, employee morale, and general success of these firms can all be greatly impacted by the leadership styles of managers and executives (Avolio & Bass, 2004). Improving organizational effectiveness and healthcare outcomes require an understanding of the dynamics of motivation and leadership in this setting. It is unclear, nevertheless, precisely how different leadership philosophies affect worker motivation in the context of healthcare NGOs in Zambia. While it is true that organizations cannot succeed unless their staff members are driven, however, employee motivation can be influenced by several elements like career advancement possibilities, job happiness, and recognition. Nevertheless, further research is needed to fully understand how these motivational elements interact with leadership styles, especially in Zambia's distinct socioeconomic and cultural setting. Like many developing nations, Zambia has particular difficulties with its healthcare system, such as a high disease burden, inadequate funding, and gaps in infrastructure (Mweemba et al., 2017). These difficulties might have a different impact on employee motivation and leadership styles than they would in more established environments.

The effectiveness and influence of NGOs are crucial in tackling urgent social and healthcare issues in today's quickly changing global environment. The performance and motivation of their employees are some of the critical components that make these firms productive. The effectiveness of these NGOs' leadership significantly impacts employee motivation and, in turn, the accomplishment of organizational objectives. Regardless of profitability, an organization's ability to remain competent and sustainable depends on its caliber of leadership practices. A leader is a behavioral mechanism that directs individuals and organizations toward a specific objective (Barrow, 1977). This paper examines the intriguing and significant subject of leadership styles in non-governmental health organizations, particularly in low- and middle-income nations. The primary goal is to evaluate the efficacy of different leadership philosophies in inspiring employees in an NGO that provides healthcare,

an industry where motivation and dedication are essential for providing essential services to marginalized communities.

NGOs in the healthcare field, particularly in areas with limited resources like Zambia, are frequently at the forefront of initiatives to enhance the health and well-being of disadvantaged groups. However, the commitment and involvement of their staff play a significant role in their effectiveness. These organizations' leaders are crucial in establishing objectives, motivating people, and influencing the work environment. Motivated employees are likelier to put in extra effort, work hard, and show a solid dedication to the company's goals. The leadership philosophies of managers and other leaders strongly impact employee motivation, improve the caliber of services, and have an overall effect on public health. Hence, it is imperative to comprehend the dynamics of motivation and leadership within the context of healthcare NGOs.

The relationship between leadership styles and employee motivation has been extensively studied. For instance, transformational leadership, characterized by its emphasis on inspiring and motivating employees, has shown significantly increasing motivation levels (Mohd, 2024). On the other hand, transactional leadership usually depends on a system of rewards and penalties, potentially leading to less intrinsic motivation compared to its transformational counterpart. Preliminary research suggests that while effective leadership is fundamental to improving employee motivation, Zambian Healthcare NGOs have not been properly explored in this context (Mawele, 2023). In addition, researchers suggest that the study of leadership greatly depends on organization culture (Klein et al., 2013; Kargas & Varoutas, 2015) because they have strong positive relationship (Kargas & Varoutas, 2015; Nam Nguyen & Mohamed, 2011). While there are a number of studies in the African context on the influence of leadership on employee motivation (Kawana, 2024) and the impact of organization culture on employee motivation (Makambe & Charles, 2020), there is limited studies on mediating role. For instance, understanding the mediating effect of organization culture allows a different approach to leadership training and development, particularly in these NGOs, which operate under unique socioeconomic challenges. Hence, this study addresses this gap by examining the mediating role of organizational culture in the relationship between various leadership styles, especially transformational and transactional leadership and employee motivation.

This study aims to fill the academic void, not only identifying effective leadership styles, but also clarifying how organizational culture acts as a critical bond between leadership and employee motivation. Research variables in this study include leadership styles (independent variable), organizational culture (mediator variable) and employee motivation (dependent variable). This study hypothesized that several leadership styles, namely democratic, autocratic, transactional, and transformational, would influence employee motivation. In addition, organizational culture would mediate the influence of employee motivation in health NGOs in Zambia.

2. Literature Review

2.1 Overview of NGOs

NGOs are "*private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development*" (World Bank, 1989). NGOs usually have a small workforce and little funding, but they nonetheless work on projects that help large portions of their communities (Benotsch et al., 2004). In recent years, they have become more and more significant in the field of international development. Due to the growing trend of bilateral and multilateral organizations collaborating with NGOs and the increase in aid passing through them, NGOs are growing in strength and influence (Lorgen, 1998).

2.1.1 Global perspective

Health NGOs are essential in tackling healthcare concerns on a global scale. These organizations function in various environments, offering healthcare services, advocating for causes, and implementing projects to enhance capabilities. Horton and Das (2008) emphasize the substantial impact of health NGOs in low- and middle-income countries, playing a crucial role in providing important healthcare services to populations with limited access.

The report published by the World Health Organization (WHO, 2006) underscores the significance of cooperation among governments, NGOs, and other relevant parties in order to attain universal health coverage and sustainable development objectives. NGOs frequently address deficiencies in the provision of healthcare, with a particular emphasis on underserved populations and overlooked illnesses. Nevertheless, the efficiency of health NGOs worldwide might be impeded by obstacles such as limited financial resources, difficulties in coordination,

and political instability (Buse & Walt, 2000). Notwithstanding these difficulties, health NGOs persist in developing new ideas and adjusting their methods to tackle changing health requirements worldwide.

2.1.2 African perspective

Health NGOs in Africa play a crucial role in supplementing government initiatives to enhance healthcare accessibility and results. The study conducted by Shamu et al. (2011) highlighted the wide range of activities carried out by health NGOs throughout the continent, encompassing HIV/AIDS prevention, efforts focused on maternal and child health, as well as the delivery of healthcare services at the community level. However, there are distinct issues that need to be addressed, such as a significant prevalence of diseases, inadequate healthcare infrastructure, and socioeconomic inequalities (Phiri & Ataguba, 2014) while they frequently prioritize activities such as enhancing skills and resources, empowering communities, and advocating for change in order to tackle these difficulties (Brinkerhoff & Bossert, 2014). Furthermore, the collaboration between African governments, NGOs, and international funders is crucial for attaining long-lasting health results (Oomman et al., 2007). They continue to encounter ongoing obstacles, including reliance on donors, limited local control, and problems with accountability (Sidibé & Campbell, 2010), hence, it is crucial to make concerted efforts to bolster health systems, foster local leadership, and improve coordination among stakeholders in order to maintain effectiveness.

There are serious concerns about the low percentage of local workers in NGO health sector positions in LMICs and the large percentage of foreign workers in leadership and medical positions (Anyangwe et al., 2007). A high percentage of foreign employees is typically a sign that a company prioritizes protecting the employer's interests over those of the workers, mostly through preserving job security and self-interest. This has major ramifications for the function and style of leadership exercised as well as employee satisfaction and motivation. It also feeds into the concerns of an assistance business driven by the interests of wealthier nations and peace and security operations in difficult foreign lands.

2.1.3 Zambian perspective

Health NGOs in Zambia have a crucial role in increasing the availability of healthcare services, especially in rural and isolated regions. For instance, the Zambia Red Cross Society

and the Churches Health Association of Zambia (CHAZ) actively participate in healthcare delivery, health education, and illness preventive activities (Zambia Ministry of Health, 2017). The Zambian government acknowledges the significance of collaborating with health NGOs in order to accomplish the country's health objectives. The National Health Strategic Plan 2017-2021 places emphasis on partnering with NGOs to enhance health systems, enhance the provision of services, and tackle significant health issues including as HIV/AIDS, malaria, and maternal mortality.

Zambia's healthcare industry continues to face persistent issues, including limited funding, inadequate infrastructure, and shortages of human resources, despite some progress being made (Zambia Ministry of Health, 2017). As a support alliance, health NGOs enhance government initiatives by utilizing their specialized knowledge, networks, and community involvement tactics to address these obstacles. For instance, as part of the PEPFAR Small Grants Program for 2023, the United States President's Emergency Plan for AIDS Relief (PEPFAR) has awarded a total of 5.7 million kwacha to 14 NGOs in Zambia. These NGOs have had a significant impact on Zambia's health system, particularly in the fight against HIV infection. Because of the current economic situation, public social services are severely insufficient in many parts of Sub-Saharan Africa; NGOs must choose how best to deploy their limited resources while still fulfilling their objectives.

2.2 Leadership Styles and Employee Motivation

Leadership in health organizations plays a crucial role in the formation of employee motivation, particularly in Zambia's unique socio-cultural context where NGOs are fundamental in the provision of health services. Leadership styles can significantly affect the morale of the workforce, job satisfaction, and the general organizational performance. Therefore, understanding the interaction between leadership styles and employee motivation is vital to improve the effectiveness of health NGOs in Zambia.

Autocratic leadership. Autocratic leadership is characterized by extensive control with the leader, with little contribution from team members. This style can produce short-term results in crisis situations. However, it often stifles creativity and leads to employee disagreement (Bass & Riggio, 2006). In the context of Zambia's health NGOs, this approach can be seen in hierarchical organizational structures, where decision making authority is

concentrated at the top, potentially leading to a lack of initiative among employees who feel undervalued (Mulenga et al., 2018).

Democratic leadership. Democratic leadership promotes collaborative decision making and recognizes the contributions of team members, which can increase satisfaction and motivation at work (Chrairi, 2024). In Zambia health environments, where community values are emphasized, a democratic approach can resonate well with employees, granting a voice and promoting higher levels of engagement. A change to a democratic style not only improved the team dynamics, but also repositioned employee motivation in organizational culture, allowing individual contributions to be recognized and celebrated (Kawana, 2024).

Transactional leadership. Transactional leadership operates in a system of rewards and penalties, focusing on maintaining the status quo and improving operational efficiency (Bass, 1990). In Zambia, where health infrastructure usually fights resource restrictions, transactional leadership can be effective in establishing performance expectations and motivating the team through tangible rewards. However, this style may neglect intrinsic motivators, such as personal growth and realization, such as risking the motivation and commitment of long-term employees (Burns, 1978).

Transformational leadership. Transformational leadership inspires and motivates employees, appealing to higher order needs and cultivating a shared vision for the future (Bass & Avolio, 1994; Avolio & Yammarino, 2013). In the context of Zambia's health NGOs, transformational leaders exert a positive influence, instigating passion among employees through significant engagement and opportunities for professional development. Cases such as the Beyond Zero Campaign, which aimed to promote access to health in Zambia, demonstrate how transformational leadership can mobilize teams around a collective cause, resulting in greater motivation and commitment of employees to the organizations objectives (Yusup & Maulani, 2023).

The comparative analysis of autocratic, democratic, transactional and transformational leadership styles reveals significant ideas about the motivation of employees within the organizational culture of Zambian health NGOs. Each leadership style has different advantages and disadvantages, influencing the motivation of employees through various degrees of autonomy, participation, rewards systems and vision alignment. For instance, autocratic leadership, characterized by centralized decision making and directive communication, often leads to immediate compliance, but can suppress creativity and intrinsic motivation

(Kirkpatrick & Locke, 1996). In Zambia health NGOs, where resources are often limited, this style can generate short-term operational benefits, mainly due to the urgency of the provision of medical care. On the contrary, democratic leadership encourages participation, promoting a sense of property and collaboration between employees, demonstrating higher levels of employee participation and innovative solutions for health challenges (Chanda et al., 2022). The participatory approach increases intrinsic motivation as employees feel valued, thus improving organizational commitment. Meanwhile, transactional leadership, with its emphasis on motivation based on rewards, is closely aligned with the operational realities of Zambia's health NGOs. This leadership style takes advantage of financial incentives and recognition to boost performance, effectively motivating employees to meet specific objectives. On the other hand, transformational leadership, which prioritizes inspiring vision and change, has shown deep effects on employee motivation. The leaders who embody the qualities of transformation often light the passion and lead to a shared vision, as evidenced by the research carried out by Chanda et al. (2022) that informs by improving the satisfaction and motivation of employees linked to transformative practices. However, the implementation of transformational leadership requires an organizational support culture that fosters confidence and open communication, which may require a cultural change in the traditionally hierarchical NGO environment. This comparative discussion suggests that although autocratic and transactional leadership can produce immediate fulfilment and performance, its long-term effects on motivation can be harmful. In contrast, democratic and transformational leadership styles seem to foster a more compromised and motivated workforce.

According to Banda (2023), factors such as work satisfaction, recognition and support for leadership have a significant impact on employee motivation levels. This underlines that effective leadership must consider local conditions and expectations. Mawele (2023) also supports this by assessing how organizational leadership directly influences motivation and creativity, which suggests that a style of participative leadership can produce better motivation results. For instance, Mulenga et al. (2018) explores communication in public health and its relationship with leadership, revealing that leaders who effectively communicate their vision and engage with employees tend to create a more motivated workforce. This is also aligned with the results of Muthuveloo et al. (2015), who suggest that stakeholders' commitment to decision-making processes can improve organizational morale and motivation.

Leadership styles are also shaped by partnerships. Arisman et al. (2016) note that successful collaborations between entities can change leadership approaches, ultimately affecting workers' motivation. When partnerships align with shared values, employees may feel more committed and motivated. On the other hand, when partnerships are less aligned, motivation could suffer. As identified by Muthuveloo et al. (2015), stakeholders often express mixed feelings if leadership does not adequately adapt to their needs. Similarly, Ahmad et al. (2024) and Iqbal et al. (2024) argue that denominational organizational management can improve organizational services through motivated staff. The leaders of these organizations often use spiritual and community links as motivation tools, which can uniquely influence the satisfaction and retention of employees. In addition, research practices influence leadership (Aboramadan & Dahleez, 2020), highlighting that well-informed leaders who include current research can better motivate their teams by aligning the objectives with the latest public health conclusions.

2.3 Leadership and Organizational Culture

Zambia's exclusive cultural factors, such as collectivism, social hierarchies and community-oriented values, further complicate the landscape in which leadership styles operate. The intricate network of interactions between leadership styles, employee motivation and organizational culture must be understood within this sociocultural environment to draw significant conclusions. The cultural context plays a fundamental role in the formation of the effects of leadership styles on employee motivation. In the society of Zambia, where collectivism prevails, a democratic style aligns more closely with the cultural values of collaboration and community. For example, a case involving an NGO focused on maternal and child health revealed that a democratic leader implemented regular sessions of feedback and brainstorming meetings, which significantly improved cohesion and motivation among employees (Peterson et al., 2011). The participatory approach helped reduce hierarchical barriers, promoting an environment in which employees thought their voices were heard and their significant contributions. On the other hand, in cases where autocratic leadership was practiced in these contexts, the results were often counterproductive. The lack of inclusive mechanisms of dialogue and feedback not only impact individual motivation, but also the overall effectiveness of organizations. As the health sector requires adaptable and responsive

approaches, the rigidity of autocratic leadership is inherently misaligned with the necessary collaborative ethos in the provision of health services.

A combined understanding of the dynamics of leadership and cultural nuances highlights that leaders who adopt democratic strategies can achieve significantly higher levels of employee motivation, engagement, and organizational performance. Evidence suggests that organizations that actively cultivate a participatory culture may have lasting benefits that extend beyond immediate motivation levels (Wang et al., 2022), contributing to the general organizational health and effectiveness in the Zambia Health scenario. By promoting a democratic environment that recognizes employee functions in organizational culture, these NGOs could improve employee motivation and improve the results of health services in Zambia.

3. Methodology

3.1 Research Design and Participants

This study utilized an exploratory research approach to examine the attributes of leadership styles, organizational culture, and their impact on employee motivation in healthcare NGOs. The exploratory technique was warranted as it facilitated a comprehensive analysis of the causal links between leadership styles (independent variables) and employee motivation (dependent variable) within the contextual frameworks of these businesses. The study was executed from May to August 2024, focusing on managers, senior personnel, and junior staff using field research aimed at gathering empirical data within the actual workplace setting.

The sampling method utilized a non-probabilistic convenience approach, yielding a sample size of 286 participants from an original population of 1,456 employees. The sample comprised 26 managers and 260 non-management personnel. The participants were selected from several departments, including research, accounting, laboratory, administration, and human resources.

Table 1 shows the demographic characteristics of the participants. It should be noted that some participants left some portions of their demographics blank. Hence, the total number of responses in each demographic profile varies. However, their responses were not discarded because they have completed the core parts of the survey.

Table 1*Demographic characteristics*

Characteristic	N	Overall, N = 286¹	Male, N = 134¹	Female, N = 152¹
Age	285*			
18 – 24		32 (11)	14 (11)	18 (12)
25 – 49		199 (70)	102 (77)	97 (64)
50+		54 (19)	17 (13)	37 (24)
Education	286			
Secondary		10 (3.5)	10 (7.5)	0 (0)
Degree		82 (29)	39 (29)	43 (28)
Diploma		112 (39)	51 (38)	61 (40)
Masters		77 (27)	33 (25)	44 (29)
PhD		5 (1.7)	1 (0.7)	4 (2.6)
Department	286			
ART		88 (31)	46 (34)	42 (28)
Administration		31 (11)	11 (8.2)	20 (13)
Laboratory		20 (7)	6 (4.5)	14 (9.2)
IT Department		23 (8)	20 (15)	3 (2)
Transport and Logistics		5 (1.7)	4 (3)	1 (0.7)
Other		119 (42)	47 (35)	72 (47)
Position	286			
Junior Employee		92 (32)	50 (25)	42 (33)
Senior		46 (16)	18 (13)	28 (18)
Supervisor		54 (19)	21 (16)	33 (22)
Manager		51 (18)	34 (25)	17 (11)
Other		43 (15)	11 (8.2)	32 (21)
Service (Years)	283*			
0 - 5		129 (46)	63 (48)	66 (44)
6 – 9		64 (23)	31 (23)	33 (22)
10+		90 (32)	38 (29)	52 (34)

Notes: ¹Total number of collected questionnaires *Demographics with missing data

3.2 Research Instrument

A structured questionnaire was employed to gather quantitative data, concentrating on independent factors such as leadership styles (transformational, transactional, authoritarian, democratic), corporate culture, and employee motivation. The questionnaire comprised 30

items assessed using a five-point Likert scale. Content validity was established by piloting the instrument and consulting experts to verify alignment of the items with the constructs being examined. Construct validity was attained by formulating questions that precisely reflect the theoretical characteristics of leadership styles, organizational culture, and motivation. Reliability was evaluated by Cronbach's alpha, indicating adequate internal consistency among the scales, as shown in table 2. The overall dependability was 0.66, while individual construct values varied from 0.58 to 0.69, demonstrating acceptability for exploratory research. A preliminary survey validated the instrument's reliability and usability in a practical situation. However, an alpha value of 0.58, although below the commonly accepted benchmark of 0.70 for robust internal consistency (Nunnally & Bernstein, 1994), is still considered acceptable in the realm of exploratory research (Hair et al., 2010). Since exploratory studies focus on uncovering patterns and relationships rather than drawing definitive conclusions, a somewhat lower reliability coefficient is allowable, particularly when addressing intricate social constructs such as leadership styles, organizational culture, and motivation (DeVellis, 2017).

Table 2

Alpha coefficient for each section of questionnaire

No.	Measurement	Number of items	Cronbach's alpha
1	Autocratic Leadership	5	0.67
2	Democratic Leadership	5	0.69
3	Transactional Leadership	5	0.68
4	Transformational Leadership	5	0.58
5	Organizational Culture	5	0.64
6	Motivation	5	0.67
Reliability of all items		30	0.66

3.3 Data Collection and Analysis

Data collection was conducted via REDCap, an online platform that guaranteed participant confidentiality and effective data management. A recruitment drive, comprising departmental meetings, notifications, and electronic correspondence, solicited eligible people to take the survey. After collection, the data was migrated from REDCap to statistical applications, including R Studio and SPSS, for analysis.

The principal variables encompassed transformational, transactional, democratic, and autocratic leadership styles (independent), organizational culture (mediating), and employee motivation (dependent). The data analysis utilized descriptive and inferential statistics to achieve the research aims. Descriptive statistics, encompassing mean scores, frequencies, and percentages, offered a summary of the sample characteristics and variable distributions. Inferential analyses, comprising Pearson correlation and generalized linear model, investigated the relationships among variables and evaluated the study hypotheses. A regression model was constructed to assess the direct and mediating influences of leadership styles and organizational culture on employee motivation. The model assumptions of multicollinearity, homoscedasticity, linearity, and normality were evaluated to confirm the validity of the regression outcomes.

The study sought approval from the University of Zambia Biomedical Research Ethics Committee (UNZABREC) Ref No. 5042-2024 and National Health Research Authority NHRA-1266/07/06/2024. Only people that gave consent participated in the study. Participants' privacy and confidentiality were maintained by collecting only de-identified data and securing data via password protection to avoid unauthorized access.

4. Findings and Discussion

Multivariate data analysis was conducted by assessing correlations among variables. The mean and standard deviation of the descriptive statistics were used to compare how the respondents perceived the variables. The sample group's average level of agreement or disagreement with the various statements is indicated by the means. Respondents are classified as strongly disagreed if the mean scored value falls between 1.00 and 1.80, disagreed between 1.81 and 2.60, neither agreed nor disagreed between 2.61 and 3.40, agreed between 3.41 and 4.20, and strongly agreed between 4.21 and 5.00 on the scale. Furthermore, the standard deviation demonstrates the variation in an observed answer.

Table 3 shows the overall mean response rates for the different types of leadership styles. It can be seen that transformational leadership had the highest mean value (Mean = 3.902, SD = 0.637) showing that most of the respondents were more inclined to this type of leadership style. It can be seen that employees also considered organizational culture as one of the important factors when it comes to employee motivation (Mean = 3.899, SD = 0.6536).

Table 3*Descriptive analyses*

		N	Min	Max	Mean	Std. Deviation
Covariate	Autocratic	278	2.00	5.00	3.8504	0.68910
	Democratic	278	1.60	5.00	3.8446	0.71842
	Transactional	278	1.40	5.00	3.5791	0.75753
	Transformational	278	2.20	5.00	3.9018	0.63702
	Organizational Culture	278	1.20	5.00	3.8996	0.65359

Table 4*Omnibus Test*

Likelihood Ratio Chi-Square	df	Sig.
146.294	14	0.000

Notes: Dependent Variable: Motivation

Model: (Threshold), Sex, Education, Service Group, Age Group, autocratic, democratic, transactional, transformational, Organizational Culture

Table 5*Goodness of fit*

	Value	df	Value/df
Deviance	1234.761	3402	0.363
Scaled Deviance	1234.761	3402	
Pearson Chi-Square	3742.731	3402	1.100
Scaled Pearson Chi-Square	3742.731	3402	
Log Likelihood ^b	-617.380		
Akaike's Information Criterion (AIC)	1290.761		
Finite Sample Corrected AIC (AICC)	1297.283		
Bayesian Information Criterion (BIC)	1392.334		
Consistent AIC (CAIC)	1420.334		

Notes: Dependent Variable: MotivationModel: (Threshold), Sex, Education, Service Group, Age Group, autocratic, democratic, transactional, transformational, Organizational Culture^a

a. Information criteria are in smaller-is-better form.

b. The full log likelihood function is displayed and used in computing information criteria.

The generalized linear model (GLM) is a flexible tool in statistical analysis. It helps researchers understand the relationships between variables when the response variable is usually not normally distributed. GLMs use three main components: a random component that describes the distribution of the response variable, a systematic component that includes

predictors and a link function that connects these two. After testing the assumptions for multilinear regression we found that they were violated and so we used the GLM.

The Omnibus Test results show a Likelihood Ratio Chi-Square of 146.294 ($p = 0.000$) as shown in table 4, confirming the model's overall significance in predicting employee motivation. Goodness-of-fit measures such as the Deviance (1234.761, $df = 3402$, Value/df = 0.363) and Pearson Chi-Square (3742.731, $df = 3402$, Value/df = 1.100) indicate that the model is a reasonable fit for the data.

Table 6

Parameter estimates

Parameter	B	Std. Error	95% Wald Confidence Interval		Hypothesis Test		
			Lower	Upper	Wald Chi-square	df	Sig.
Sex							
Male	-0.238	0.2275	-0.684	0.208	1.094	1	0.295
Female	0 ^a	.	.	.	.	.	.
Education							
Secondary	-0.922	0.9911	-2.864	1.020	0.865	1	0.352
Degree	-0.304	0.8492	-1.968	1.361	0.128	1	0.720
Diploma	-0.565	0.8458	-2.223	1.092	0.447	1	0.504
Masters	-0.628	0.8480	-2.290	1.034	0.549	1	0.459
PHD	0 ^a	.	.	.	.	.	.
Service Years							
0 - 5	-0.350	0.2784	-0.896	0.195	1.583	1	0.208
6 - 9	-0.413	0.3114	-1.024	0.197	1.763	1	0.184
10+	0 ^a	.	.	.	.	.	.
Age							
< 25	0.572	0.4321	-0.275	1.419	1.752	1	0.186
25 - 49	0.936	0.3149	0.319	1.554	8.845	1	0.003
50+	0 ^a	.	.	.	.	.	.
Leadership Styles							
Autocratic	0.708	0.1937	0.329	1.088	13.376	1	0.000
Democratic	0.238	0.2041	-0.162	0.638	1.362	1	0.243
Transactional	-0.403	0.1661	-0.729	-0.078	5.899	1	0.015
Transformational	1.275	0.2468	0.791	1.759	26.682	1	0.000
Organizational Culture (Scale)	0.721	0.2371	0.257	1.186	9.252	1	0.002
	1 ^b						

Notes: Dependent Variable: Motivation

Model: (Threshold), Sex, Education, Service Group, Age Group, autocratic, democratic, transactional, transformational, Organizational Culture

a. Set to zero because this parameter is redundant.

b. Fixed at the displayed value.

The initial hypothesis posited that autocratic leadership will substantially influence employee motivation. The findings in table 6 demonstrate that autocratic leadership significantly influences employee motivation (Beta = 0.708, $p = 0.000$), indicating that it serves

as a predictor of employee motivation. This contradicts previous research indicating that when employees perceive their contributions as overlooked due to insufficient participative procedures, their motivation and morale may decline (Deci & Ryan, 2000). In resource-limited environments, the anticipation for autonomy and involvement may be moderated by the existing conditions of operational limitations and resource deficiency. Doshmangir et al. (2025) indicate that in contexts with narrowly defined roles and constrained resources, autocratic leadership may be regarded as essential and even favorable by employees familiar with hierarchical frameworks and explicit direction. According to Blanchard and Johnson (2010), this leadership style can lead to efficient coordination of tasks, especially in high-pressure situations where ambiguity can undermine operational effectiveness. In healthcare NGOs, where the stakes are high and the need for immediate actions can often arise—such as during disease outbreaks or when addressing emergent public health issues—autocratic leadership can facilitate decisive leadership that may enhance organizational performance. However, the centralization of authority inherent in autocratic leadership may have mixed implications for employee motivation. One of the principal criticisms of this style is its potential to stifle individual creativity and reduce job satisfaction, especially in a field that requires adaptability and innovation (Avolio & Bass, 2004). Research indicates that when employees feel their contributions are disregarded due to a lack of participative practices, motivation and morale may suffer (Deci & Ryan, 2000). It posits that, paradoxically, some healthcare workers might feel more secure under autocratic leaders, whose firm guidance may mitigate uncertainties associated with resource limitations. Furthermore, the cultural context of Zambia, where traditional leadership frameworks often favour hierarchical and directive styles, may also influence employees' responses to autocratic leadership. Oh et al. (2023) found that local norms regarding authority and respect for leaders can enhance the effectiveness of autocratic methods in some instances, allowing for a degree of social acceptance that could counterbalance the potential negative effects on motivation.

The second hypothesis posits that transactional leadership influenced employee motivation. The findings indicated that transactional leadership was a significant negative predictor of employee motivation (Beta = -0.403, $p = 0.015$). This aligns with Chirwa et al. (2019), who contend that excessively transactional methods may estrange employees who prioritize inclusivity and collaborative leadership. Consequently, whereas transactional leadership can stimulate prompt performance enhancements, its capacity to foster enduring

motivation may be hindered in culturally varied environments. The efficacy of transactional leadership within the Zambian setting necessitates a comprehensive awareness of the issues encountered by healthcare personnel, as reiterated by Chen et al. (2024) that emotional labor, burnout, and socio-economic obstacles may impede performance. Thus, although transactional leadership can effectively secure compliance and immediate organizational objectives, it requires an additional emphasis on transformational tactics to improve intrinsic motivation and job satisfaction among healthcare professionals in NGOs.

The third hypothesis suggests that democratic leadership influenced employee motivation. The results indicate that democratic leadership positively influenced employee motivation; however, this effect was not statistically significant (Beta = 0.238, $p = 0.243$). This aligned with the findings of Chanda et al. (2022) that healthcare staff in Zambia experienced heightened job satisfaction and motivation when leaders employed democratic procedures that sought input and feedback on operational difficulties. This responsiveness not only affirms employee contributions but also enables them to undertake initiatives that may enhance patient care and service efficiency. Additionally, the environment of healthcare NGOs in Zambia, where cultural norms may traditionally favour hierarchical leadership structures, hampers the application of democratic procedures. Effective democratic leaders can bridge the cultural divide by cultivating an environment that promotes communication and collaboration, so enabling team members to utilize their various skills to attain organizational objectives.

The fourth hypothesis suggests that transformational leadership influenced employee motivation. Transformational leadership positively influenced employee motivation, with statistical significance (Beta = 1.275, $p = 0.000$). This aligns with Arnold (2017) that transformational leaders enhance intrinsic motivation, engagement, and job satisfaction, creating an environment where people feel valued and empowered. Within Zambian healthcare NGOs, which often function amid scarcity and elevated community expectations, transformational leadership can foster a profound feeling of purpose and dedication among personnel. Empirical studies highlight the distinct benefits of transformational leadership, especially in addressing the issues specific to the healthcare sector in developing countries. Tian et al. (2020) and Krishna et al. (2021) emphasize that transformational leadership approaches are favourably associated with staff retention rates and organizational commitment, which could also be reflected among healthcare workers in Zambian NGOs.

The fifth hypothesis claims that organizational culture serves as a mediation variable influencing employee motivation. The findings indicate that organizational culture positively influenced employee motivation and was statistically significant (Beta = 0.721, $p = 0.002$). Cultural variations significantly affect communication patterns and the methods of delivering and receiving feedback inside Zambian enterprises. In high-context cultures like Zambia, non-verbal communication and indirect messaging are typically favoured, in stark contrast to Western leadership paradigms that often rely on direct communication and assertive feedback mechanisms (De Vries et al., 2010). This mismatch may result in misunderstandings if Zambian employees perceive direct feedback as confrontation instead of constructive criticism. Leaders in these NGOs must implement culturally appropriate communication strategies that align with their staff's expectations and conventions, thereby improving motivation through culturally sensitive feedback mechanisms.

5. Conclusion

The study findings emphasize the necessity for a balanced leadership strategy that incorporates both transformative and participative components, taking into account contextual limitations. Healthcare NGOs in Zambia can improve employee engagement by promoting inclusive, purpose-oriented leadership and implementing culturally sensitive communication tactics. The results suggest that health NGOs should adopt transformational leadership, with organizational culture serving as a framework that mediates the impact of leadership styles on employee motivation.

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Declaration

The author declares the use of Artificial Intelligence (AI) in writing this paper. In particular, the author used QuillBot in searching appropriate literature, summarizing key points and paraphrasing ideas. The author takes full responsibility in ensuring proper review and editing of contents generated using AI.

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