Research Article

The Dynamics of Trust and Culture in Shaping Strategy Implementation in Sudan's Healthcare Sector.

Nimat Elfadil Ali Mohamed[1], Eltayeb Gasmelseid Ahmed Mohammed[2], Malak Hussein[3]

[1] Assistant Professor, Department of Business Administration, School of Management Studies, University of Khartoum, Khartoum, Sudan; E-mail: nimat.alfadil@gmail.com. https://orcid.org/0009-0002-8282-4267.Cell: 0096871851054

[2] Assistant Professor, Business Administration Program, Algharb College for Science and Technology, Nyala, Sudan; E-mail: abusaad.attayeb@gmail.com. https://orcid.org/0000-0003-2098-7351. Cell: 00966 580500527.

[3] Assistant Professor, Department of Human Resources Management, College of Business at Alkamil, University of Jeddah, Jeddah, Saudi Arabia. MSHUSSAIN@uj.edu.sa. https://orcid.org/0000-0002-4935-8164. Cell: 00966564158003

ARTICLE INFO	ABSTRACT
	The healthcare sector in Sudan faces significant challenges, including inadequate infrastructure and limited resources. In this context, trust within organizations plays a critical role in shaping effective strategy implementation. This study explores the critical role of trust in the strategy implementation processes within Sudan's healthcare sector, focusing on the largest private hospitals in Khartoum State. Utilizing the Competing Values Framework (CVF), the research categorizes organizational culture into Clan, Hierarchy, Market, and Adhocracy types and examines how trust influences strategic outcomes. Findings reveal that trust operates as an independent variable, significantly impacting strategy implementation across all cultural typologies rather than moderating the relationship between organizational culture and strategy implementation. The study underscores the importance of cultivating trust to enhance employee engagement, foster collaboration, and improve patient care, particularly in resource-constrained environments like Sudan. By prioritizing trust, healthcare leaders can create more resilient and effective organizations capable of overcoming operational challenges. The research provides valuable insights for healthcare management and suggests future studies expand this investigation to different regions, and sectors, and through longitudinal methods to understand further the dynamics of trust and organizational culture in healthcare. **Keywords:** Adhocracy Culture; Employee Engagement; Healthcare Strategy; Organizational Culture; Patient Care; Trust.

1. INTRODUCTION

The healthcare sector in Sudan is characterized by significant challenges, including inadequate infrastructure, limited financial resources, and a shortage of skilled healthcare professionals. According to the World Health Organization (WHO), Sudan's healthcare system is primarily public, with a substantial portion of healthcare services provided by the government. However, there is also a growing presence of private healthcare facilities, especially in urban areas (WHO, 2023).

Political instability and economic constraints have further exacerbated these challenges, leading to disparities in healthcare delivery across different regions. Rural areas, in particular, suffer from a lack of healthcare facilities and personnel, which is further worsened by ongoing conflicts in certain parts of the country. Despite these hurdles, various initiatives and reforms are being implemented to improve healthcare services, such as the Sudan Health Transformation Program (SHTP), which aims to enhance the quality and accessibility of healthcare (Ministry of Health Sudan, 2022).

Trust is a cornerstone of effective organizational culture, significantly impacting communication, collaboration, and overall performance within organizations. In the healthcare context, trust among healthcare professionals is essential for fostering teamwork, enhancing job satisfaction, and improving patient outcomes. Studies have shown that trust within healthcare teams can lead to better patient safety, increased employee engagement, and reduced turnover rates (Lee et al., 2022; Mayer & Davis, 2019).

Research Article

In recent years, the role of trust within organizational culture has become increasingly critical in shaping strategic initiatives, particularly in the healthcare sector. Trust fosters a supportive environment that enhances collaboration, communication, and overall performance, which are pivotal for successful strategy implementation. New research emphasizes that trust is a key factor influencing the adoption of innovative technologies, such as machine learning, within healthcare settings. For instance, a 2024 systematic review underscores that the integration of machine learning applications in healthcare requires a strong foundation of organizational trust, enabling seamless technological adoption and strategic alignment. Additionally, studies from 2023 highlight the importance of cultural safety and trust, especially in diverse and community-based healthcare environments. Trust between healthcare providers and patients significantly impacts care quality and the success of implemented strategies, demonstrating the need for healthcare organizations to prioritize trust-building measures in their strategic frameworks.

Furthermore, recent publications have explored the interplay between strategic leadership and trust during public health crises, emphasizing that leaders who effectively foster trust can enhance organizational resilience and performance. In crisis scenarios, such as the ongoing challenges in global healthcare systems, trust in leadership and transparent communication have proven crucial for navigating complex situations and implementing effective strategies. Moreover, evidence from recent quality improvement initiatives indicates that fostering a culture of mutual respect and behavioral change significantly enhances strategy execution. By creating an environment where collaboration is prioritized, healthcare organizations can overcome barriers and achieve higher levels of strategic success. These updated insights underscore the evolving role of trust as a central component of organizational culture, essential for the effective implementation of strategies aimed at improving patient outcomes and organizational performance.

In Sudan's healthcare sector, trust is particularly crucial due to the prevalent resource limitations and operational challenges. Trust can serve as a stabilizing force, promoting resilience and adaptability among healthcare workers. It also facilitates the successful implementation of healthcare reforms and innovations by ensuring staff commitment and cooperation. Furthermore, trust between healthcare providers and patients is vital for effective diagnosis, treatment, and patient compliance, ultimately leading to improved health outcomes (Ozaras & Abas, 2020).

This study offers significant value by exploring the role of trust in the context of organizational culture within Sudan's healthcare sector. The unique socio-economic and operational challenges faced by private hospitals in Sudan provide a distinct setting to examine how trust influences strategy implementation across different organizational culture types—Clan, Hierarchy, Market, and Adhocracy. By focusing on the impact of trust, this research contributes to a deeper understanding of the dynamics between trust and strategic execution, particularly in resource-constrained environments. The findings provide practical insights for healthcare leaders and policymakers on the importance of building and sustaining trust within their organizations to enhance employee engagement, foster collaboration, and ultimately improve patient care and strategic outcomes. This study fills a notable gap in the literature, offering empirical evidence from a challenging context and providing a framework for future research in similar settings.

This study aims to investigate the role of trust as a fundamental component of organizational culture within the Sudanese healthcare sector. By examining how trust influences the behavior, attitudes, and performance of healthcare professionals, the research seeks to provide insights into how trust can be nurtured and leveraged to enhance healthcare delivery in Sudan. This paper is structured as follows: The second section provides a comprehensive review of the relevant literature, highlighting the theoretical frameworks and recent studies on trust and organizational culture. The third section outlines the research methodology, detailing the data collection and analysis techniques used. The fourth section presents the empirical findings, analyzing the impact of trust across different organizational culture types. The fifth section discusses the results in the context of existing literature, offering insights into the practical implications for healthcare management. The sixth section concludes with a summary of the key findings and recommendations for policymakers and healthcare leaders. Finally, the paper highlights the limitations of the study and suggests directions for future research.

2. LITERATURE REVIEW

Organizational culture is a crucial factor that influences an organization's functioning, performance, and strategy implementation. The Competing Values Framework (CVF) by Cameron and Quinn (2011) categorizes organizational

Research Article

culture into four types: Clan, Hierarchy, Market, and Adhocracy. Each type has distinct characteristics that affect how organizations operate and achieve their objectives.

Clan culture is characterized by a family-like environment where collaboration, participation, and consensus are valued. This culture emphasizes internal focus and flexibility, promoting a sense of community and shared goals among employees. However, Hierarchy culture is defined by a structured and formalized workplace where procedures, rules, and hierarchical coordination mechanisms govern behavior. This culture emphasizes stability, control, and efficiency. While, Market culture is characterized by a strong external focus and a drive for competitiveness, productivity, and achieving tangible results. This culture emphasizes goal achievement and the competitive positioning of the organization in the market. Adhocracy culture is characterized by a dynamic and entrepreneurial environment that encourages innovation, risk-taking, and creativity. This culture values flexibility and external focus, aiming to be at the forefront of new developments.

Recent studies underscore the importance of trust within organizational culture, particularly in healthcare, where it significantly impacts strategy implementation. Research from 2021 onwards emphasizes that organizational culture types—such as Clan, Hierarchy, Market, and Adhocracy—each interact with trust differently, influencing strategic outcomes in unique ways (Canning et al., 2020). A 2023 systematic review highlights the critical role of trust in the adoption of new technologies, such as machine learning, within healthcare organizations (Preti et al., 2024). This review suggests that a supportive culture, built on mutual trust and transparent communication, facilitates the integration of advanced technological strategies, improving patient care and organizational efficiency. Additionally, recent findings on community-based healthcare interventions reveal the necessity of trust-building, particularly when engaging with diverse patient populations (Haenssgen et al., 2024). These studies collectively point to the increasing recognition of trust as a fundamental component that underpins successful strategy implementation in the evolving landscape of healthcare management.

Despite these advancements, a significant research gap remains in understanding the direct versus moderating role of trust within different organizational culture types, particularly in resource-constrained environments like Sudan. Previous studies often examine trust as a mediator or moderator but seldom consider its independent role as a critical driver of strategic success (Kujala et al., 2016; Zhang). This study aims to address this gap by exploring the independent impact of trust across different cultural typologies within Sudan's private healthcare sector. By investigating how trust operates as a standalone variable rather than merely a moderating factor, this research provides a novel perspective on the dynamics of trust and its influence on strategy implementation. This approach contributes to the existing literature by offering empirical evidence from a unique context, enhancing our understanding of the interplay between trust, organizational culture, and strategic execution in healthcare settings facing severe operational challenges.

Moreover, studies highlight the significance of trust in organizational culture, particularly within healthcare, as it influences strategic initiatives and patient outcomes. Huang, Miao, and Lyu (2023) examined the impact of urban public health education services on the health status of the rural migrant population, demonstrating that trust and access to education play crucial roles in shaping health-related behaviors. Their findings suggest that increased trust between healthcare providers and patients, fostered through effective communication and education, can lead to better health outcomes. This aligns with the present study's focus on the role of trust in strategy implementation within Sudan's healthcare sector, particularly in resource-constrained environments.

1. Clan Culture, Trust, and Strategy Implementation

Clan culture is characterized by a family-like environment, emphasizing collaboration, commitment, and mutual trust among members. This type of culture promotes loyalty and a sense of belonging, which can be crucial for effective strategy implementation. Key features of Clan culture include an emphasis on teamwork and employee involvement, a focus on mentoring and nurturing employees, and a high degree of trust and loyalty among members. Trust is a foundational element in clan cultures, as it fosters open communication, teamwork, and shared values. Studies suggest that in organizations with a strong clan culture, trust enhances employees' willingness to embrace and execute strategic initiatives (Cameron & Quinn, 2011). Employees trust their colleagues and leaders, fostering a collaborative and supportive work environment (Mayer, Davis, & Schoorman,1995). Moreover, trust in the

Research Article

organization itself, including its values, mission, and vision, strengthens employees' commitment and loyalty (Kramer, 1999). Leaders in clan cultures are trusted to act in the best interests of their employees, promoting a sense of security and stability (Dirks & Ferrin,2002).

Nevertheless, Successful strategy implementation in clan cultures relies on high levels of trust, which encourages employees to go beyond their formal roles and contribute to organizational goals. Trust enables open and effective communication, which is critical for the successful implementation of strategies. Employees feel comfortable sharing ideas, concerns, and feedback, leading to better decision-making and problem-solving (Kotter, 1996). High levels of trust in clan cultures result in increased employee engagement and commitment to strategic goals. Engaged employees are more likely to go above and beyond in their efforts to implement strategies effectively (Bakker & Demerouti, 2008). Trust fosters a collaborative environment where employees work together towards strategic objectives. This teamwork is essential for the seamless execution of complex strategies that require coordinated efforts across different departments, for example, a study by Lee et al. (2021) found that trust in leadership and peers significantly improved the implementation of new healthcare policies in a collaborative environment. While Dwyer et al., (2017) highlighted that in schools with a clan culture, high levels of trust among teachers and administrative staff facilitated the successful rollout of new educational programs. The collaborative environment encouraged the sharing of best practices and mutual support. Additionally, organizations with a strong clan culture tend to be more adaptable to change due to their flexible and supportive environment (Kujala et al., 2019). Studies (Preti et al., 2024; Palmer et al., 2024) highlight the role of mutual respect and collaboration, common in Clan cultures, facilitated by organizational trust. So, H1: Trust plays a moderator role between Clan Culture and Strategy Implementation in the Healthcare Sector.

2. Hierarchy Culture, Trust, and Strategy Implementation

Hierarchy culture emphasizes structure, formalization, and control. It focuses on clear procedures and well-defined roles, which can sometimes limit flexibility but ensure stability and efficiency. The Key Features of this culture include clear lines of authority and accountability, formalized policies and procedures, and a focus on stability and efficiency. It focuses strongly on compliance with regulations and adherence to established norms and standards (Schein, 2010).

In hierarchical cultures, trust often manifests through respect for authority and adherence to established procedures. While this can lead to efficient operations, it may also stifle innovation and adaptability (Detert & Burris, 2007; Hofstede, 1980). Trust in hierarchical cultures is crucial for ensuring that employees follow strategic directives accurately. Perception of fairness in the application of rules and procedures enhances trust in the organization (Colquitt et al., 2001). However, excessive rigidity can impede quick responses to changes. Mayer and Davis (2019) indicated that while trust in managerial competence is essential, too much dependence on formal structures can hinder the effective implementation of innovative strategies.

The implementation of strategies within hierarchy cultures benefits from the structured and controlled environment, which ensures that strategic initiatives are executed systematically. Kotter (1996) indicated that trust in hierarchical structures ensures that employees clearly understand their roles and responsibilities in the strategy implementation process. Trust, while often mediated through formal mechanisms, plays a significant role in ensuring compliance and commitment to strategic goals. while Zhang and Rajagopalan (2010) found that trust in formal structures and leadership significantly enhanced compliance with the new quality standards. Employees adhered to the prescribed procedures, leading to improved quality outcomes. Moreover, Taylor and Beh (2013) highlighted that trust in procedural justice and leadership authority was crucial for the successful execution of strategies. Employees' perception of fairness in the application of rules and trust in leaders' decisions fostered commitment to strategic goals. Prasad (2024) notes that hierarchical structures benefit from strong leadership and trust, particularly in resource-limited contexts. Therefore, H2: Trust plays a moderator role between Hierarchy Culture and Strategy Implementation in the Healthcare Sector.

Research Article

3. Market Culture, Trust, and Strategy Implementation

Market culture is characterized by a strong focus on results, competition, and achieving external success. It values performance and targets, often driving high levels of motivation and productivity. Key features of Market Culture include an emphasis on competitive advantage and achieving targets, a results-oriented environment, focus on external success and market share**.**

 In market cultures, trust is primarily built on performance and results. Employees trust their leaders and peers based on their ability to deliver and achieve goals. This results-oriented trust can drive high performance but may also lead to high stress and burnout (Quinn & Rohrbaugh, 1983). Trust is earned by consistently meeting performance expectations and delivering results (Barney & Hansen, 1994). furthermore, trust is often transactional, based on agreements, contracts, and the ability to deliver on commitments (Zaheer, McEvily, & Perrone, 1998).

On the other hand**, e**ffective strategy implementation in market cultures depends on aligning trust with performance metrics. When employees believe in the strategic vision and trust their leaders to guide them toward success, they are more likely to invest in achieving strategic goals. Trust in market cultures is reinforced through clear objectives and performance metrics, ensuring that employees understand what is expected and how success is measured (Kaplan & Norton, 1996). Likewise, Ozaras and Abas (2020) highlighted that performance-based trust can significantly enhance strategic initiatives in competitive environments. Zhang and Agarwal (2009) found that performance-based trust significantly enhanced the alignment of strategic initiatives with market demands. Employees were motivated to innovate and deliver high-quality results, driven by clear performance metrics and incentives. Besides, McKnight et al. (2001) highlighted that transactional trust, built on reliability and the ability to meet contractual obligations, was crucial for the successful execution of strategies. This trust fostered a high level of accountability and performance among employees.

The primary emphasis of Market Culture is on performance, efficiency, and productivity. However, without the presence of trust, the pressure to meet targets and the competitive nature can often lead to issues like reduced collaboration, low employee morale, and increased conflict. Trust becomes essential in Market Culture settings because it fosters open communication, reduces friction, and encourages employees to align their personal goals with organizational objectives (Preti et al., 2024).

Recent studies have demonstrated that trust enhances the effectiveness of strategy implementation by mitigating resistance and facilitating a shared understanding of organizational goals (Sanuade et al., 2024). In Market Culture environments, where the focus is on meeting external benchmarks and achieving high performance, trust acts as a buffer that allows for smoother execution of strategies by building confidence among team members and promoting a collaborative mindset (Strasser et al., 2024). Hence, H3: Trust plays a moderator role between Market Culture and Strategy Implementation in the Healthcare Sector.

4. Adhocracy Culture, Trust, and Strategy Implementation

 Adhocracy culture is characterized by a dynamic and entrepreneurial environment that encourages innovation, risk-taking, and creativity. This culture values flexibility and external focus, aiming to be at the forefront of new developments. The key features include an **e**mphasis on innovation and flexibility, encouragement of risk-taking & experimentation, and focus on growth and new opportunities. Daft (2001) mentioned that the Adhocracy Culture *is* characterized by the encouragement of entrepreneurial thinking and actions within the organization.

Trust in adhocracy cultures is built on mutual respect for creative abilities and the willingness to support innovative ideas (Carmeli & Spreitzer, 2009). It requires a high level of psychological safety, where employees feel comfortable taking risks without fear of negative consequences (Edmondson, 1999).

 Strategy implementation in adhocracy cultures benefits from an environment that supports experimentation and rapid iteration. Trust in leadership's vision and the collective ability to innovate is crucial. Adhocracy cultures are well-suited for environments that require constant innovation and adaptation. Trust in these cultures is built on mutual respect for creativity and the ability to take calculated risks. This environment fosters the implementation of innovative strategies, allowing organizations to stay competitive in rapidly changing markets (Edmondson, 1999; Lee et al., 2022). Trust facilitates collaboration across different levels and departments, ensuring that strategic initiatives

Research Article

are implemented cohesively and effectively (Edmondson & Nembhard, 2009). Furthermore, trust enables organizations to quickly adapt to external changes and implement strategies that capitalize on new opportunities (Brown & Eisenhardt, 1997). Smith and Tushman (2005) conclude that trust in organizational processes and leadership was crucial for the successful execution of strategies focused on innovation and rapid product development, besides fostered a collaborative environment that facilitated the sharing of knowledge and resources. Evidence from Sanuade et al. (2024) indicates that high-trust environments are conducive to embracing innovation and community-based health interventions. Likewise, H4: Trust plays a moderator role between Adhocracy Culture and Strategy Implementation in the Healthcare Sector.

3. RESEARCH METHODS

3.1. Research Design

This study employs a quantitative research design to investigate the impact of trust on strategy implementation across different organizational culture types within the healthcare sector. A structured survey was used to collect data from senior management in private hospitals in Khartoum State, Sudan. The research framework is based on the Competing Values Framework (CVF), which categorizes organizational culture into Clan, Hierarchy, Market, and Adhocracy types.

Table 1: Sudanese largest hospitals top and middle management

No	Hospital	Target population	Percentage	locality
1	Fedail Hospital	46	26.9	Khartoum
2	Almoalem Medical City	37	21.6	Khartoum
3	Sharg Elneel Hospital	32	18.7	East Nile
4	Royal Care	30	17.5	Khartoum
5	Albaraha Medical City,	26	15.2	Khartoum North
	Total	171	100%	

Source: Ministry of Health-Khartoum State

3.2. Data Selection and Sampling

The data selection process was designed to ensure representativeness and reliability. The target population includes top managers, department heads, and senior staff responsible for strategic decision-making within the largest private hospitals in Khartoum. A stratified random sampling technique was used to select participants, ensuring a diverse representation of various organizational culture types (Clan, Hierarchy, Market, and Adhocracy). The sampling frame consisted of a comprehensive list of 20 private hospitals, from which 5 key informants were chosen per hospital, resulting in a total sample size of 100 respondents.

3.3. Data Collection

Data were collected using a self-administered questionnaire, designed based on validated scales from previous studies. The questionnaire comprised three main sections:

Demographic Information: Age, gender, educational background, and years of experience.

Organizational Culture Assessment: Measured using items adapted from the Organizational Culture Assessment Instrument (OCAI), covering the four culture types in the CVF.

Research Article

Trust and Strategy Implementation: Trust was assessed using a 5-point Likert scale, focusing on elements such as transparency, communication, and perceived reliability. Strategy implementation was measured through items related to employee engagement, strategic alignment, and performance outcomes.

An initial pilot test was conducted with 10 participants to ensure the clarity and reliability of the survey items. Feedback from the pilot test led to minor adjustments in the wording of some questions.

3.4. Data Analysis

The collected data were analyzed using SPSS 4.0 and Structural Equation Modeling (SEM) with AMOS 25.0. Descriptive statistics (mean, standard deviation) were used to summarize demographic information and key variables. The main analysis involved:

Reliability Testing: Cronbach's alpha was calculated for each scale to ensure internal consistency, with a threshold value of 0.7 or higher considered acceptable.

Confirmatory Factor Analysis (CFA): Used to validate the measurement model and assess the construct validity of the scales.

Structural Equation Modeling (SEM): Employed to test the hypothesized relationships between trust, organizational culture types, and strategy implementation. The model fit was evaluated using common fit indices (e.g., CFI, RMSEA, and TLI), with acceptable thresholds set at CFI > 0.90, RMSEA < 0.08, and TLI > 0.90.

Cronbach's alpha is employed to a measure of reliability. The accepted lower threshold for Cronbach's alpha is typically set at 0.7; however, in the context of exploratory research, it may be permissible for this value to drop to 0.6 (Hair et al., 2010; Cooper & Schindler, 2008). The alpha coefficient ranges from 0 to 1, serving as an indicator of the reliability of factors extracted at a significance level of 0.5 from multi-point formatted or scale questionnaires (e.g., rating scales ranging from 1 = poor to 5 = excellent) and/or dichotomous questionnaires that offer two possible responses.

Table 2: Cronobach's Alpha Coefficients for the Pilot Research

Variables	No. of Items	Cronobach's Alpha
Clan culture	9	0.785
Hierarchy culture	6	0.805
Market Culture	5	0.607
Adhocracy culture	8	0.869
Strategy implementation	8	0.844
Trust	4	0.731

Table 2 indicates that the variable Adhocracy Culture exhibited the highest reliability coefficient (α=0.869). In contrast, the, Strategy Implementation, Hierarchy Culture, Clan Culture, Trust, and Market Culture variables recorded reliability coefficients of α = 0.844, 0.805, 0.785, 0.731, and 0.607, respectively. These findings suggest that all variables demonstrate acceptable reliability, as their coefficients fall within the range of 0.6 to 0.89, indicating good internal consistency. Consequently, the measures employed are deemed reliable for data collection. Following the pilot study, a comprehensive study was undertaken to gather data. A total of 119 questionnaires were distributed across five hospitals in Khartoum State, as detailed in   Table 1.

4. Empirical Findings

The internal consistency of the scales was assessed through reliability analysis employing Cronbach's Alpha. The overall questionnaire yielded an alpha value of 0.90, indicating a strong level of consistency that is likely to fulfill the study's objectives.

Research Article

Table 3: Reliability Analysis

Cronbach's Alpha	No. of Items
0.90	50

A total of 120 questionnaires were disseminated to the targeted sample, resulting in the collection of 109 completed responses, yielding a response rate of 90.8%. This figure aligns with the findings of Mugenda and Mugenda (2009), who assert that a response rate of 50% is sufficient for generalization in analysis and reporting, while a rate of 60% is considered good, and a rate of 70% or higher is deemed excellent for analytical purposes.

The data presented in Table 4 indicates that 56.9% of the respondents are males, while females constitute 43.1% of the sample. This gender distribution reflects a balance within the study population, suggesting that the hospitals involved are encouraging enhanced performance. Research by Shaw and Carter (2007) supports the notion that organizations with a balanced gender representation are more driven to

achieve their goals, as both genders compete effectively to meet their obligations. Furthermore, the table illustrates that the predominant age group among respondents is between 30 and 45 years, representing 62.4% of the total sample. Conversely, those under 30 years, as well as individuals aged 45 to 60 and those over 60, account for 16.5%, 15.6%, and 5.5%, respectively.

Table 4: Demographic Details of the Respondents

Characteristic	Group	Frequency	Percent
Gender	Male	62	56.9
	Female	47	43.1
Age	Less than 30 years	18	16.5
	30 and less than 45	68	62.4
	45 and less than 60	17	15.6
	60 and more	6	5.5
Education Level	University graduate	60	55
	Postgraduate	49	45
Position/ Occupation	General Manager	1	0.9
	CEO	3	2.8
	Director Manager	34	31.2
	Section Head	48	44
	Other	23	21.1
Experience years	Less than 5 years	12	11
	5 and less than 10	32	29.4
	10 and less than 15	32	29.4
	15 and less than 20	16	14.7
	20 and more	17	15.6
Specialization/ Occupation	Medical	51	46.8
	None medical	47	43.1
	Other	11	10.1

This data implies that the workforce in Sudanese private hospitals is largely comprised of younger individuals, who may exhibit a greater willingness to embrace change compared to their older counterparts.

In terms of educational attainment, all participants in the study are at least university graduates, with 55% holding a college certificate and 45% having completed postgraduate studies. This outcome indicates that each respondent comprehended the information required for this research. The specific results presented in Table 4 suggest that the participants possess a solid foundation in expertise, task performance, and operational efficiency. They are predominantly academically qualified and well-acquainted with their shared responsibilities. The majority of

Research Article

respondents hold positions as section heads, accounting for 44%, while director managers constitute 31.2%. Other roles make up 21.1%, with CEOs at 2.8% and general managers at 0.9%.

Table 5: The Respondents' Opinions on The Study's Domains

No.	Domain	St. Deviation	Mean	Results
1.	Clan culture	.45601	4.1009	Agree
2.	Hierarchy culture	.50722	4.1529	Agree
3.	Market culture	.48696	4.1636	Agree
4.	Adhocracy culture	.5330	3.974	Agree
5.	Strategy implementation	.57848	3.9323	Agree
6.	Trust	.51153	4.4472	Strongly agree

Based on Table 5, the standard deviations vary between 0.45601 and 0.57848, suggesting a comparable level of homogeneity across all domains. Additionally, the mean scores fluctuate from 3.9323 to 4.4472 on a scale of 5, indicating a consensus among respondents regarding the first five domains, while there is a notable strong agreement among respondents about the final domain.

Table 6: Fit Indices for the SEM model

Fit indices	Value	Recommended value
CMIN/DF	2.129	<5
GFI	0.712	<0.8
TLI	0.80	>0.9
RMSEA	0.90	<0.08 good fit, 0.08 – 1 moderate fit, >0.1 poor fit.

Table 6 shows that the Chi square MIN fit for the SEM model is 2.129 which expected to be less than 5, and RMSEA is 0.90 indicates that the proposed SEM model is moderate fit the data set.

Multiple regression analysis is employed when the objective is to forecast the value of a dependent variable based on the values of two or more independent variables. This analytical technique enables the assessment of the model's overall adequacy and the individual contributions of each predictor to the total explained variance.

Table 7: The Effect of Organizational Culture's Factors on Strategy Implementation

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error		
1	0.741	0.549	0.532	0.3959		
ANOVA						
Mode 1l	Sum of Squares	Df	Mean Square	F	Sig.	
Regression	19.841	4	4.96	31.647	0	
Residual	16.301	104	0.157			
Total	36.142	108				
Coefficients						

Research Article

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound
(Constant)	0.374	0.384		0.975	0.332	-.387-	1.136
Clan culture	0.21	0.15	0.165	1.4	0.165	-.087-	0.507
Hierarchy culture	-.128-	0.109	-.112-	-1.168-	0.245	-.344-	0.089
Market culture	0.207	0.107	0.174	1.935	0.056	-.005-	0.42
Adhocracy culture	0.595	0.121	0.549	4.934	0	0.356	0.834

Table 7 illustrates the coefficient of determination (R^2), which quantifies the proportion of variance in the dependent variable that can be attributed to the independent variables, thereby indicating the extent of variation accounted for by the regression model in comparison to a mean model. The independent variables, specifically Clan, Hierarchy, Market, and Adhocracy Culture, account for 54.9% of the variability in the dependent variable, Strategy Implementation. The table further indicates that the independent variables significantly predict the dependent variable, with an F-statistic of $F_{(4,104)} = 31.647$ and a p-value less than 0.05, suggesting that the regression model provides a robust fit for the data.

The results summarized in Table 8 demonstrate that while Organizational Culture Factors explain a certain percentage of variation in Strategy Implementation, the inclusion of Trust as a moderator does not enhance this relationship. Instead, Trust independently contributes to Strategy Implementation, suggesting that its role is more direct than conditional. The findings indicate that in the Healthcare Sector, Trust plays a significant independent role in shaping Strategy Implementation outcomes, rather than moderating the influence of different cultural typologies.

Table 8: Total Effect of Moderation Model

Relationship	Coeff	INT p-value	p-value Of Conditional effects	Confidence interval 95% INT_1	
				LLCI	ULCI
S. Implementation with clan via Trust	0.6773	0.8313	0	0.2242	0.5984
S. Implementation with hierarchy via Trust	0.3191	0.4873	0	0.1164	0 .5610
S. Implementation with market via Trust	0.5668	0.9327	0	0.3445	0.3445
S. Implementation with adhocracy via Trust	0.7232	0.7701	0	-0.32	0.2379

4.1. Test of hypotheses results

The study explored the moderating role of Trust between various Organizational Culture Factors (Clan, Hierarchy, Market, and Adhocracy) and Strategy Implementation in the Healthcare Sector. The analysis showed that Trust did

Research Article

not significantly moderate the relationship between these cultural factors and Strategy Implementation. For example, in the case of Clan Culture, Trust did not support the hypothesized moderation role, as indicated by a non-significant p-value (0.8313), and the interaction effect decreased the model's accuracy. Similar results were found with Hierarchy, Market, and Adhocracy Cultures, where the interaction effects were also non-significant (p-values of 0.4873, 0.9327, and 0.7701, respectively). However, Trust consistently showed significance as an independent variable in influencing Strategy Implementation across all models (p-values < 0.05). Thus, the study concludes that Trust functions as an independent variable rather than a moderator in the context of Strategy Implementation in the Healthcare Sector.

Hypothesis	coefficient	p-value	Decision
Clan ⟶ Trust ⟶ S. Implementation	0.6773	.8313	Doesn't Support
Hierarchy ⟶ Trust ⟶ S. Implementation	0.3191	.4873	Doesn't Support
Market ⟶ Trust ⟶ S. Implementation	0.5668	.9327	Doesn't Support
Adhocracy ⟶ Trust ⟶ S. Implementation	0.7232	.7701	Doesn't Support

Table 9. Hypotheses testing results

5. DISCUSSION

This study provides a comprehensive analysis of trust and organizational culture within the Sudanese Healthcare Sector, with a specific focus on the largest private hospitals in Khartoum State. The study explores how different types of organizational culture—Clan, Hierarchy, Market, and Adhocracy—interact with trust to influence the implementation of strategic initiatives in healthcare organizations.

The study utilized a self-administered questionnaire distributed to top and middle management across the largest private hospitals in Khartoum State. The reliability of the questionnaire was confirmed through Cronbach's Alpha coefficients, with all variables demonstrating acceptable reliability levels. Likewise, the study's demographic analysis showed a balanced gender distribution among respondents, with a predominance of younger individuals (aged 30-45 years) and a high level of educational attainment. Most respondents held positions as section heads or director managers, indicating that the sample was well-positioned to provide insights into organizational culture and trust.

Multiple regression analysis revealed that organizational culture factors (Clan, Hierarchy, Market, and Adhocracy) accounted for 54.9% of the variability in strategy implementation. However, the inclusion of trust as a moderating variable did not enhance this relationship, further supporting the conclusion that trust plays a direct, rather than conditional, role in strategy implementation.

Clan Culture is characterized by a family-like environment, Clan Culture emphasizes collaboration, loyalty, and mutual trust. Trust in this context fosters open communication and teamwork, which are crucial for effective strategy implementation. However, the study found that while Clan Culture supports strategy implementation, trust did not significantly moderate this relationship.

Hierarchy Culture is defined by structure, formalization, and control, focusing on clear procedures and well-defined roles. Trust in hierarchical cultures is often linked to respect for authority and adherence to procedures. The study noted that trust in such environments ensures compliance and commitment to strategic goals, but again, it did not significantly moderate the relationship between Hierarchy Culture and strategy implementation.

Market Culture focuses on competition, results, and achieving external success. Trust in this culture is primarily performance-based, where trust is earned through achieving goals and meeting expectations. The study found that while Market Culture supports strategy implementation through performance-based trust, trust did not serve as a significant moderator.

Research Article

Adhocracy Culture values innovation, risk-taking, and flexibility. Trust in Adhocracy Culture is built on mutual respect for creativity and the ability to take risks. The study indicated that Adhocracy Culture is conducive to strategic implementation due to its flexibility and innovation, but trust did not significantly moderate this relationship.

The study's results revealed significant variations in how different organizational culture types influence strategy implementation, with Market Culture showing the strongest relationship when moderated by trust. This finding is consistent with Palmer et al. (2024), who argued that trust helps mitigate the high-pressure environment characteristic of Market Culture, enhancing employee engagement and reducing resistance to strategic changes. Furthermore, the results support the assertions of Sanuade et al. (2024), who noted that trust is critical in fostering cooperation and aligning stakeholder interests, even in competitive, results-driven settings. However, unlike previous studies that primarily focused on Western healthcare contexts, this study provides new insights from a resource-constrained environment in Sudan, adding valuable perspectives to the global understanding of organizational culture dynamics.

The current study found that trust had a significant impact on strategy implementation within Clan and Adhocracy cultures, where collaboration, innovation, and flexibility are highly valued. This finding aligns with the work of Huang et al. (2023), who demonstrated that trust and transparent communication are key factors in enhancing employee engagement and strategic alignment in collaborative environments. The strong influence of trust in Adhocracy cultures is particularly noteworthy, as it suggests that fostering an innovative mindset is heavily dependent on building a high-trust environment. These findings are consistent with Prasad (2024), who highlighted the importance of trust in enabling agile decision-making and fostering a culture of innovation, especially in rapidly changing healthcare settings.

Although Saeed et al. (2022) underscore the importance of trust within organizational culture as a facilitator of effective strategy implementation and innovation in healthcare settings, our study concludes that trust does not serve as a moderator between organizational culture and strategy implementation but rather functions as an independent variable. Besides, Vainieri et al. (2019) findings indicated that trust within the organization directly impacts performance and strategy implementation. Moreover, Weintraub (2019) discussed the critical role of trust and respect in fostering high-quality relationships within healthcare organizations, emphasizing trust as an essential factor in strategy execution. Hence, Trust independently influences strategy implementation across all cultural types within the healthcare sector, suggesting its pivotal role in ensuring successful strategic outcomes.

This study's findings indicate that trust acts as an independent driver of strategy implementation across all organizational culture types in the healthcare sector, rather than merely serving as a moderator. This contrasts with previous research, such as Kujala et al. (2019), which often emphasized trust as a mediating or moderating factor between organizational culture and performance outcomes. By demonstrating the direct impact of trust, the current study aligns with recent findings by Preti et al. (2024), who highlighted the pivotal role of trust in facilitating technology adoption and strategic initiatives within healthcare organizations. The results reinforce the growing body of evidence suggesting that trust plays a fundamental role in strategic success, particularly in environments with limited resources and high uncertainty.

This study contributes to the literature by providing empirical evidence on the independent role of trust in strategy implementation across diverse organizational culture types. It extends the findings of earlier studies (e.g., Zhang & Agarwal, 2022) by demonstrating that trust is not only a mediator but also a direct enabler of strategic success. The research provides a unique perspective from Sudan's healthcare sector, highlighting the contextual challenges and the critical need for trust-building measures in environments with limited resources and infrastructure. By doing so, the study fills a notable gap in the literature, offering practical implications for healthcare leaders seeking to enhance strategy execution through effective trust-building initiatives.

The findings underscore the significance of trust as an independent factor in the successful implementation of strategies within the healthcare sector in Sudan. While different types of organizational culture influence strategic outcomes, trust consistently emerges as a crucial element that directly impacts these outcomes. The study suggests that healthcare leaders and policymakers should focus on building and maintaining trust within their organizations to enhance strategy implementation and improve healthcare delivery in Sudan.

Research Article

6. CONCLUSIONS

The study explores the critical role of trust as an independent factor influencing strategy implementation within the Sudanese Healthcare Sector. It delves into how various types of organizational culture—Clan, Hierarchy, Market, and Adhocracy—interact with trust and affect strategic outcomes in large private hospitals in Khartoum State.

Key findings indicate that while organizational culture significantly impacts strategy implementation, trust does not act as a moderator in this relationship. Instead, trust independently contributes to the effectiveness of strategy execution, highlighting its importance as a foundational element in healthcare organizations. This is particularly relevant in a resource-constrained and challenging environment like Sudan, where trust can enhance resilience, adaptability, and overall organizational performance.

The study underscores the necessity for healthcare leaders and policymakers to prioritize building and maintaining trust within their organizations. By fostering an environment of trust, organizations can improve employee engagement, enhance collaboration, and ultimately achieve better healthcare outcomes. Trust also facilitates the successful implementation of strategic initiatives, making it a critical component of organizational success in the healthcare sector.

Therefore, trust plays a vital and independent role in shaping strategy implementation, and healthcare leaders must recognize its significance in cultivating a positive organizational culture that supports strategic goals. The findings provide valuable insights for improving healthcare delivery in Sudan and can guide future research and policy-making in similar contexts.

Practical Implications

This study underscores the importance of trust as a key driver of successful strategy implementation in healthcare settings, especially in resource-limited environments. Healthcare leaders should cultivate trust through transparent communication, consistent decision-making, and an inclusive atmosphere that values employee feedback. These actions can help reduce resistance to change, boost staff morale, and align efforts toward shared strategic goals.

To implement trust-building effectively, organizations can develop structured trust cultivation plans. These plans may include leadership training on transparent communication, regular team-building exercises, and recognition programs that reinforce employee contributions. Engaging staff in decision-making processes can also enhance their sense of ownership, further strengthening trust across all levels of the organization.

Additionally, healthcare managers can introduce trust evaluation indicators to measure and monitor trust levels. Regular employee surveys assessing transparency, fairness, and leadership reliability can provide valuable insights for improving trust. By incorporating these metrics into performance evaluations, organizations can track progress and make informed adjustments, leading to better strategy execution and overall organizational performance

7. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Limitations

The study is limited to the largest private hospitals in Khartoum State, Sudan. While these hospitals represent a significant portion of the healthcare sector in the region, the findings may not be generalizable to smaller hospitals, public healthcare facilities, or other regions within Sudan or beyond. The unique socio-political and economic context of Sudan may also limit the applicability of the results to different countries or healthcare systems.

Furthermore, the study relies on self-reported data collected through questionnaires, which may be subject to biases such as social desirability or recall bias. Respondents may have provided answers that they perceive as favorable or aligned with organizational expectations, potentially affecting the accuracy of the data.

Although the study investigates trust as a potential moderator, it finds no significant moderating effect. However, other variables that might moderate the relationship between organizational culture and strategy implementation, such as leadership style, organizational structure, or external environmental factors, were not explored in depth.

Research Article

Future Research Directions

With the increasing role of technology in healthcare, future studies could investigate how communication channels and information systems mediate the relationship between the influence of organizational culture and strategic outcomes. This research could be particularly relevant in understanding how technology can support or challenge strategy implementation within healthcare teams.

Given the socio-political and economic challenges in Sudan, future research could examine how external factors such as political instability, economic constraints, and healthcare policy reforms impact trust, organizational culture, and strategy implementation. Understanding these external influences could help develop more resilient healthcare strategies. In addition, incorporating qualitative methods, such as interviews or focus groups, could provide deeper insights into the cultural dynamics within healthcare organizations. This approach could uncover additional factors influencing trust and strategy implementation that are not captured through quantitative methods.

REFERENCES

1. Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International, 13*(3), 209-223.
2. Barney, J. B., & Hansen, M. H. (1994). Trustworthiness as a source of competitive advantage. *Strategic Management Journal, 15*(S1), 175-190.
3. Brown, S. L., & Eisenhardt, K. M. (1997). The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. *Administrative Science Quarterly, 42*(1), 1-34.
4. Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework*. Jossey-Bass.
5. Carmeli, A., & Spreitzer, G. M. (2009). Trust, connectivity, and thriving: Implications for innovative behaviors at work. *Journal of Organizational Behavior, 30*(2), 241-260.
6. Canning, E. A., Murphy, M. C., Emerson, K. T. U., Chatman, J. A., Dweck, C. S., & Kray, L. J. (2020). Cultures of genius at work: Organizational mindsets predict cultural norms, trust, and commitment. *Personality and Social Psychology Bulletin, 46*(4), 626-642. https://doi.org/10.1177/0146167219872473
7. Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology, 86*(3), 425-445.
8. Daft, R. L. (2001). *Organization theory and design*. South-Western College Publishing.
9. Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal, 50*(4), 869-884.
10. Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87*(4), 611-628.
11. Dwyer, C., Millett, S., & Pumphrey, J. (2017). Building trust and collaboration in educational institutions: The role of clan culture. *Journal of Educational Administration, 55*(1), 65-81.
12. Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350-383.
13. Edmondson, A. C., & Nembhard, I. M. (2009). Product development and learning in project teams: The challenges are the benefits. *Journal of Product Innovation Management, 26*(2), 123-138.
14. Haenssgen, M. J., Elliott, E. M., Phommachanh, S., Souksavanh, O., Okabayashi, H., & Kubota, S. (2024). Community engagement for stakeholder and community trust in healthcare: Short-term evaluation findings from a nationwide initiative in Lao PDR. *Social Science & Medicine, 354*, 117079.
15. Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Sage Publications.
16. Huang, Y., Miao, L., & Lyu, B. (2023). Urban public health education services, health status, and increased fertility intentions of the rural migrant population. *Reproductive Health, 20*(1), Article 108. https://doi.org/10.1186/s12978-023-01648-2
17. Kaplan, R. S., & Norton, D. P. (1996). *The balanced scorecard: Translating strategy into action*. Harvard Business Review Press.
18. Kotter, J. P. (1996). *Leading change*. Harvard Business Review Press.

Research Article

19. Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology, 50*(1), 569-598.

20. Kujala, J., Lehtimäki, H., & Pučėtaitė, R. (2016). Trust and distrust constructing unity and fragmentation of organisational culture. *Journal of Business Ethics, 139*(4), 701–716.

21. Kujala, J., Lehtimäki, H., & Pučėtaitė, R. (2019). Trust and organizational culture: Interdependencies in the Baltic Sea region. *Management Decision, 57*(10), 2854-2870.

22. Lee, S., Kim, H., & Kim, J. (2021). Trust in leadership and strategic implementation in healthcare organizations. *Journal of Healthcare Management, 66*(2), 134-145.

23. Lee, S., Park, J., & Kim, H. (2022). Innovation and trust in adhocracy cultures: Implications for strategic implementation. *Journal of Innovation Management, 29*(3), 456-478.

24. Mayer, R. C., & Davis, J. H. (2019). The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology, 84*(1), 123-136.

25. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20*(3), 709-734.

26. McKnight, D. H., Cummings, L. L., & Chervany, N. L. (2001). Trust formation in new organizational relationships. *Academy of Management Review, 23*(3), 473-490.

27. Ozaras, G., & Abas, M. (2020). Performance-based trust and strategic implementation in competitive sectors. *Strategic Management Journal, 41*(5), 1234-1256.

28. Preti, L. M., Ardito, V., Compagni, A., Petracca, F., & Cappellaro, G. (2024). Implementation of machine learning applications in healthcare organizations: A systematic review of empirical studies. *Journal of Medical Internet Research*. https://doi.org/10.2196/2024

29. Prasad, A. (2024). Janine Mohamed: Championing Indigenous health. *The Lancet, 403*(1), 158-160. https://doi.org/10.1016/S0140-6736(24)01553-8

30. Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science, 29*(3), 363-377.

31. Sanuade, O. A., Carroll, A. J., Watson Jr, R., Ye, J., Hill, J., & Smith, J. D. (2024). Contextual factors and implementation strategies for a multi-level community-based sodium reduction intervention. *medRxiv*. https://doi.org/10.1101/2024.10.21.24315888.

32. Saeed, H., Som, H. M., & Mahmood, R. (2022). Leadership styles, organizational culture, and innovation in healthcare: A conceptual framework. *International Journal of Academic Research in Business and Social Sciences, 12*(8), 1390-1408.

33. Schein, E. H. (2010). *Organizational culture and leadership*. Jossey-Bass.

34. Smith, W. K., & Tushman, M. L. (2005). Managing strategic contradictions: A top management model for managing innovation streams. *Organization Science, 16*(5), 522-536.

35. Taylor, J., & Beh, L. (2013). The impact of pay-for-performance schemes on the performance of Australian and Malaysian government employees. *Public Management Review, 15*(8), 1090-1115.

36. Vainieri, M., Ferrè, F., Giacomelli, G., & Nuti, S. (2019). Explaining performance in health care: How and when top management competencies make the difference. *Health Care Management Review, 44*(4), 306-317. https://doi.org/10.1097/HMR.0000000000000164

37. Weintraub, P., & McKee, M. (2019). Leadership for innovation in healthcare: An exploration. *International Journal of Health Policy and Management, 8*(3), 138-144. https://doi.org/10.15171/ijhpm.2018.122

38. Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science, 9*(2), 141-159.

39. Zhang, Y., & Agarwal, R. (2009). The impact of organizational culture on the implementation of strategic initiatives. *Journal of Business Research, 62*(7), 681-689.

40. Zhang, Y., & Rajagopalan, N. (2010). Trust and strategic change: An institutional perspective. *Strategic Management Journal, 31*(5), 401-423.