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Narratives of Organizational DNA: A Comparative Study

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ABSTRACT:

Background: Organizational DNA is a metaphor describing the fundamental traits that shape how institutions function, interact, and adapt. It encompasses four key dimensions—decision rights, information flow, motivators, and organizational structure—that collectively influence efficiency, employee engagement, and strategic alignment. While prior studies have demonstrated the impact of organizational DNA on institutional excellence in industrial sectors, limited research has examined its role within healthcare systems, particularly in the Saudi Arabian context under Vision 2030 reforms.

Objectives: This study aimed to explore and compare organizational DNA across four Saudi healthcare systems—Hospital A, Hospital B, Hospitals C, and Hospital D—to identify similarities, differences, and documentary implications for institutional excellence.

Methods: A qualitative narrative research design was employed, supported by a systematic review of policy documents and published literature (2014–2024). Data sources included governance frameworks, communication policies, reward systems, and organizational charts. Institutional narratives and comparative tables were analyzed thematically across the four DNA dimensions. Validity and reliability were ensured through triangulation, audit trails, and independent reviewer validation.

Results: Findings revealed distinct organizational DNA profiles. Hospital A demonstrated decentralized authority, structured communication, and hybrid organizational flexibility. Hospital B exhibited a six-tier pyramidal hierarchy with performance-linked motivators and vertical communication. Hospitals C reflected centralized cluster-level governance with limited documentation of motivators and formal communication policies. Hospital D emphasized fairness and transparency through committee-based decision rights, structured communication, and digitally integrated organizational systems. Across all cases, variations in documentary completeness highlighted the distinction between formal policy provisions and unrecorded institutional practices.

Conclusion: Organizational DNA in Saudi healthcare institutions varies significantly across systems, shaped by governance frameworks, incentive structures, and communication practices. Decentralization, balanced motivators, and adaptive structures are associated with institutional excellence in documented governance models. These insights extend existing literature by situating organizational DNA within healthcare and linking it to Vision 2030 transformation. Future research should incorporate qualitative interviews and longitudinal designs to capture lived experiences and evolving organizational DNA under ongoing reforms.

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1. INTRODUCTION

Organizational DNA is a metaphor that captures the fundamental traits shaping how institutions function,(1) interact, and adapt. Much like biological DNA encodes the blueprint of living organisms, organizational DNA encompasses the principles of decision rights, information flow, motivators, and structure (2) that define an organization's identity and capacity for excellence. Rooted in Neilson, Pasternack, and Mendes's foundational organizational design framework, these four building blocks operate interdependently: decision rights establish accountability and speed of execution; information flow determines how operational and clinical knowledge reaches decision-makers; motivators align individual behaviours with institutional goals; and organizational structure defines formal reporting boundaries and cross-functional coordination. Understanding these dimensions is critical for leaders and policymakers, as they directly shape efficiency, employee engagement, and strategic alignment. (3)

Existing literature has demonstrated the significance of organizational DNA in driving institutional performance.(4) For example, studies in the industrial sector, such as Alexandria petroleum companies, revealed a statistically significant relationship between organizational DNA and institutional excellence,(5) mediated by organizational performance. These findings underscore the importance of examining organizational DNA as a framework for diagnosing strengths and weaknesses and fostering cultures of innovation and accountability.(6) n healthcare settings—characterized by high clinical complexity, multidisciplinary care teams, and stringent safety mandates—aligned organizational DNA supports institutional excellence by reducing administrative bottlenecks, strengthening care coordination, and enabling rapid adaptation to evolving clinical and regulatory demands.

However, despite growing interest, there remains a notable gap in the literature regarding how organizational DNA manifests across different national and sectoral contexts. Most prior research has focused on corporate or industrial organizations,(7) with limited exploration of healthcare systems—particularly within the unique regulatory and cultural environment of Saudi Arabia. Under Saudi Vision 2030 and its Health Sector Transformation Program, public healthcare institutions are undergoing major structural corporatization, decentralization into regional health clusters, and digital integration aimed at improving healthcare quality, operational efficiency, and institutional excellence. These national reforms highlight the urgency of understanding how governance structures, communication policies, incentive systems, and organizational frameworks are codified across diverse Saudi healthcare models.(8)

This study addresses that gap by systematically reviewing organizational DNA across four distinct healthcare institutions in Saudi Arabia and contextualizing them against international organizational literature. By applying a narrative qualitative design to policy documents and published literature, the research provides insights into how cultural, regulatory, and structural factors shape organizational DNA and where documentary gaps exist. Ultimately, this work contributes to both theory and practice by offering a structured comparative framework for aligning organizational DNA with institutional excellence in rapidly changing environments.

2. MATERIALS AND METHODS

2.1 Setting and Institutional Selection:

Four public healthcare systems in Saudi Arabia were purposively selected using maximum-variation sampling to represent distinct care levels, governance models, and operational scales within the national health transformation landscape (Table 1). Selecting a quaternary referral medical city (Hospital A), a large tertiary academic trauma center (Hospital B), a multi-hospital regional health cluster network (Hospitals C), and a specialized secondary-care hospital (Hospital D) enabled a structured comparison across single-institution versus networked cluster governance models.

Table 1. Institutional Characteristics of the Four Selected Saudi Healthcare Systems

Institution	Bed Capacity	Staff Number (Approx.)	Academic Institution and Research Canter	Specialties and Subspecialty
Hospital A	500 beds (Quaternary referral hospital)	3100	Training Canter & Research.	Cardiac, Oncology, Neurosciences, Specialized Surgery, Organ Transplant, Eye Health Canters.
Hospital B	1,400–1,500 beds (Tertiary care, Level 1 Trauma centre)	Over 9,000 staff	Teaching Hospital affiliated with multiple universities (e.g., King Saud University), providing specialized training and research services.	Emergency Care, Trauma, Orthopaedics, Burn, Bariatric Surgery, Dental Care, and Critical Care.
Hospitals C	3,094 beds (Total capacity across 14-15 hospitals and a medical centres)	Around 15 thousand.	Academic Departments in each hospital, with one research centre for all organizations	Offers Specialized Care, Primary Health Care, Virtual Care, and Home Health Care through its network.
Hospital D	200 beds (Makkah)	1200	Academic and research units.	Secondary Care level.

Institution	**Governance & Care Model**	**Bed Capacity**	**Staff Number (Approx.)**	**Academic Institution and Research Center**	**Specialties and Subspecialties**
Hospital A	Quaternary referral medical city (autonomous executive governance)	500 beds (Quaternary referral hospital)	3,100	Training Center & Research.	Cardiac, Oncology, Neurosciences, Specialized Surgery, Organ Transplant, Eye Health Centers.
Hospital B	Tertiary academic medical center (traditional	1,400–1,500 beds (Tertiary care, Level 1 Trauma center)	Over 9,000 staff	Teaching Hospital affiliated with multiple universities (e.g., King Saud	Emergency Care, Trauma, Orthopaedics, Burn, Bariatric Surgery, Dental

Institution	Governance & Care Model	Bed Capacity	Staff Number (Approx.)	Academic Institution and Research Center	Specialties and Subspecialties
	institutional hierarchy)			University), providing specialized training and research services.	Care, and Critical Care.
Hospitals C	Regional health cluster network (multi-facility cluster governance)	3,094 beds (Total capacity across 14–15 hospitals and medical centers)	Around 15,000	Academic Departments in each hospital, with one research center for all organizations.	Offers Specialized Care, Primary Health Care, Virtual Care, and Home Health Care through its network.
Hospital D	Secondary specialized hospital (committee-governed model)	200 beds (Makkah)	1,200	Academic and research units.	Secondary Care level.

2.2 Study Design

This study adopts a qualitative, narrative research design combined with a systematic review framework. The narrative approach was chosen to capture institutional stories, policy histories, and organizational practices, while the systematic review component ensures rigor, reproducibility, and comprehensive coverage of published evidence. The design is consistent with qualitative reporting standards outlined in PubMed-indexed journals (e.g., COREQ – Consolidated Criteria for Reporting Qualitative Research).

- Narrative Research: Focuses on institutional stories and documentary histories, emphasizing how policies and organizational structures are codified, structured, and formally framed.
- Systematic Review Component: Ensures transparent identification, selection, and synthesis of published policies and research articles relevant to organizational DNA across healthcare systems.

2.3 Data Sources

Data were collected from three primary sources covering the period 2014–2024:

1. **Policy Documents:** Official governance frameworks, delegation matrices, communication policies, reward and appraisal systems, and organizational charts from the four Saudi healthcare institutions (Hospital A, Hospital B, Hospitals C, and Hospital D).
2. **Institutional Narratives:** Leadership accounts, committee charters and decisions, and organizational histories extracted from official institutional documents and comparative governance reports.
3. **Published Literature:** Peer-reviewed articles indexed in PubMed, Scopus, and Web of Science between 2014 and 2024, focusing on organizational DNA, institutional excellence, and healthcare management.

2.4 Eligibility Criteria (Systematic Review Component and Documentary Component)

- **Inclusion:**
    - Peer-reviewed studies and official institutional policy documents issued or active between 2014 and 2024.
    - Articles and institutional documents addressing at least one of the four organizational DNA dimensions (decision rights, information flow, motivators, organizational structure).
    - Healthcare and cross-sector organizational studies relevant to Saudi Arabia or comparable public-sector contexts.
- **Exclusion:**
    - Non-English/Arabic publications without translation.
    - Studies lacking methodological transparency or unapproved internal memos lacking formal institutional endorsement.
    - Opinion pieces or editorials without empirical or documentary data.

2.5 Data Collection Procedures

- Policy Review: Policies were retrieved from governmental databases, institutional archives, and published organizational frameworks.

Each retrieved document was evaluated for authenticity, formal approval status, institutional scope, and temporal relevance (2014–2024) prior to inclusion.

- Systematic Search: Databases searched included PubMed, Scopus, and Web of Science using
- keywords: "organizational DNA," "decision rights," "information flow," "motivators," "organizational structure," "healthcare management," "Saudi Arabia."
- Screening: Two independent reviewers screened titles, abstracts, full texts, and institutional policy records. Discrepancies were resolved through consensus with a third senior reviewer.
- Extraction: Data extraction utilized a standardized extraction matrix capturing organizational DNA attributes, contextual factors, documentary source type, and explicit gaps where specific dimensions were not formally codified.

2.6 Data Analysis

- Narrative Analysis: A deductive-inductive thematic coding framework was developed a priori around the four core organizational DNA dimensions, with sub-themes emerging inductively from the institutional texts. Institutional stories and policy provisions were coded systematically across all four cases using standardized operational definitions:
    1. Decision Rights – Authority distribution, formal delegation thresholds, and committee governance patterns.
    2. Information Flow – Formal communication channels, reporting lines, and transparency mechanisms.
    3. Motivators – Financial and non-financial incentive structures, appraisal mechanisms, and cultural drivers.
    4. Organizational Structure – Hierarchy tiers, structural flexibility, digital integration, and alignment with strategy.
- Systematic Synthesis: Extracted data were aggregated and compared across the four institutions using a cross-case comparative matrix to identify convergences, divergences, and areas of limited documentary evidence.
- Triangulation and Independent Validation: Findings were validated by methodological and data triangulation—cross-referencing policy documents, institutional narratives, and published literature within and across cases. Two independent researchers coded the documentary dataset separately; inter-coder discrepancies were reviewed in consensus meetings to ensure consistent application of thematic categories across all four institutional cases.

2.7 Validity and Reliability

To ensure rigor and reproducibility:

- Credibility: Achieved through triangulation of multiple data sources and member checking with institutional stakeholders.
- Dependability: Maintained via audit trails documenting search strategies, coding decisions, and policy interpretations.
- Transferability: Supported by thick description of institutional contexts (Table 1),enabling application to similar healthcare systems.
- Confirmability: Ensured by independent reviewer validation, explicit documentation of evidentiary limitations, and transparent reporting of analytic procedures.

2.8 Study Timeline

- **Stage 1:** Identification of published policies and literature (2014–2024).
- **Stage 2:** Screening and eligibility assessment.
- **Stage 3:** Data extraction and narrative coding.
- **Stage 4:** Thematic synthesis and comparative analysis.

DNA Dimension	Hospital A	Hospital B	Hospitals C	Hospital D
Decision Rights	Policies show decentralized authority, with the Minister of Health delegating decision-making to the CEO.	Authority is highly centralized under the CEO, defined by a six-tier pyramidal hierarchy.	Centralized governance; authority flows from the cluster CEO with only partial delegation to hospital directors.	Exercised through program boards and committees, emphasizing cross-functional leadership and fairness.
Information Flow	Structured communication via newsletters, meetings, and emails, balancing openness and confidentiality.	Flows vertically along defined reporting lines with strict documentation requirement.	Fragmented communication revealed in narratives, with reliance on informal networks due to absence of documented policies.	Structured communication using flowcharts, stakeholder mapping, and committee-based feedback, promoting transparency.
Motivators	Monetary and non-monetary rewards, including recognition programs and career progression.	Performance-linked systems, including forced ranking, competency-based scoring, and grievance committees.	Reliance on non-monetary motivators (recognition, role assignments), with staff noting the absence of financial rewards.	Emphasize performance, innovation, and loyalty, including wellness incentives and team-building.

DNA Dimension	Hospital A	Hospital B	Hospitals C	Hospital D
Organizational Structure	A hybrid organizational structure that is periodically reviewed to align with strategic goals, reflecting adaptability.	A rigid pyramidal hierarchy with six tiers, which ensures clarity of authority but limits flexibility.	Structures are fixed and cluster-driven, emphasizing stability but restricting innovation.	Committee-based leadership and HIM-driven digital systems reflect a structured yet innovative design.

3. RESULTS AND DISCUSSION

3.1 Preliminary Analysis and Cross-Case Comparative Matrix

The analysis examined organizational DNA across four Saudi healthcare systems—Hospital A, Hospital B, Hospitals C, and Hospital D—using narrative research and systematic review of policy documents. To provide a structured overview before presenting dimension-specific findings, Table 2 synthesizes the comparative profiles across all four DNA dimensions and explicitly distinguishes documented institutional practices from areas where documentary evidence was limited.

Table 2. Comparative Matrix of Organizational DNA Dimensions and Documentary Evidence Across the Four Healthcare Systems3.2 Decision Rights

DNA Dimension	Hospital A	Hospital B	Hospitals C	Hospital D	Cross-Case Synthesis & Documentary Completeness
Decision Rights	Policies show decentralized authority, with the Minister of Health delegating decision-making to the CEO (internal approval for levels 3–4; ministerial oversight for levels 1–2).	Authority is highly centralized under the CEO, defined by a six-tier pyramidal hierarchy with formal approval chains and dotted-line reporting.	Centralized cluster-level governance; authority flows from the cluster CEO with only partial delegation to individual hospital directors (even minor delegations require cluster approval).	Exercised through program boards and committees, emphasizing cross-functional leadership and fairness.	Fully documented across all 4 cases. Contrasts executive decentralization (Hospital A) and committee governance (Hospital D) against institutional centralization (Hospital B) and cluster-level centralization (Hospitals C).

DNA Dimension	Hospital A	Hospital B	Hospitals C	Hospital D	Cross-Case Synthesis & Documentary Completeness
Information Flow	Structured communication via newsletters, meetings, and emails, balancing openness and confidentiality.	Flows vertically along defined reporting lines with strict documentation requirements tied to scope-of-service mandates.	Fragmented communication revealed in narratives, with reliance on informal networks due to limited/absent documented communication policies.	Structured communication using flowcharts, stakeholder mapping, and committee-based feedback, promoting transparency.	Documented in Hospitals A, B, and D; limited formal policy documentation in Hospitals C (evidenced primarily via narrative accounts).
Motivators	Monetary and non-monetary rewards, including recognition programs and career progression.	Performance-linked systems, including forced ranking, competency-based scoring, and grievance committees.	Documented reliance on non-monetary motivators (recognition, role assignments), with limited documentation of formal financial incentive frameworks and narrative reports of staff frustration.	Emphasize performance, innovation, and loyalty, including wellness incentives and team-building.	Comprehensive policy records in Hospitals A, B, and D; partial documentary evidence in Hospitals C (financial reward policies not codified in available records).
Organizational Structure	A hybrid organizational structure that is periodically reviewed to align with strategic goals, reflecting adaptability.	A rigid pyramidal hierarchy with six tiers, which ensures clarity of authority but limits flexibility.	Structures are fixed and cluster-driven, emphasizing network-wide stability but restricting local innovation.	Committee-based leadership and HIM-driven digital systems reflect a structured yet innovative design.	Fully documented via organizational charts across all 4 cases, illustrating single-facility adaptive/digital models (A, D) versus rigid hierarchical/cluster models (B, C).

3.2 Decision Rights

Hospital A: Policies demonstrate decentralized authority, with the Minister of Health delegating decision-making to the CEO. Supervisory appointments and restructuring at levels 3–4 are approved internally, while levels 1–2 require ministerial oversight.

Hospital B: Authority is defined by a six-tier pyramidal hierarchy, emphasizing formal approval processes and dotted-line reporting. Decision-making is highly centralized under the institutional CEO.

Hospitals C: Unlike Hospital B's single-institution pyramidal centralization, authority in Hospitals C operates across a multi-hospital cluster network, flowing from the cluster CEO with only partial delegation to individual hospital directors. Even minor operational delegations require cluster-level approval, reflecting centralized network-level governance.

Hospital D: Decision rights are exercised through program boards and committees, emphasizing cross-functional leadership and fairness in governance.

3.3. Information Flow

Hospital A: Internal communication policies ensure transparency through newsletters, meetings, and emails, balancing openness with confidentiality.

Hospital B: Formal communication policies are well documented, with information flowing vertically along defined reporting lines and strict documentation requirements tied to scope-of-service mandates.

Hospitals C: In contrast to Hospital B's codified vertical reporting rules, documentary records for Hospitals C lacked standardized cluster-wide internal communication policies. Narratives reveal fragmented communication, with reliance on informal networks to bridge administrative gaps across member hospitals.

Hospital D: Structured communication is achieved through flowcharts, stakeholder mapping, and committee-based feedback, promoting transparency and compliance.

3.4 Motivators

Hospital A: Employees benefit from monetary and non-monetary rewards, including recognition programs and career progression.

HOSPITAL B: Motivators are performance-linked, with forced ranking, competency-based scoring, and grievance committees ensuring accountability.

Hospitals C: Available records document reliance on non-monetary motivators (recognition, role assignments), whereas formal policies governing financial incentives were not documented in the reviewed archives, aligning with narrative accounts of staff frustration at the absence of financial rewards.

HOSPITAL D: Rewards emphasize performance, innovation, and loyalty, with wellness incentives, team-building, and recognition programs enhancing engagement.

3.5 Organizational Structure

Hospital A: A hybrid organizational structure is periodically reviewed to align with strategic goals, reflecting adaptability.

HOSPITAL B: A rigid pyramidal hierarchy with six tiers ensures clarity of authority but limits flexibility.

Hospitals C: Structures are fixed and cluster-driven, emphasizing stability across the 14–15 facilities but restricting facility-level innovation.

HOSPITAL D: Committee-based leadership and HIM-driven digital systems reflect structured yet innovative organizational design.

3.6 Comparative Insights

- Decentralization vs. Centralization: Hospital A demonstrates executive decentralization, while Hospital B and Hospitals C emphasize centralization at distinct structural levels—single-institution hierarchical centralization in

Hospital B versus multi-facility cluster-level centralization in Hospitals C. Hospital D balances authority through participatory committees.

- Communication: Hospital A and Hospital D show structured, multi-directional communication, and Hospital B maintains formal vertical communication mandates, whereas Hospitals C lack formal documented communication policies and rely on informal networks.
- Motivators: Hospital A and Hospital D integrate monetary and non-monetary rewards; Hospital B emphasizes formal performance-linked appraisal systems; Hospitals C rely primarily on non-monetary recognition with limited documentation of financial incentives.
- Structure: Hospital A's hybrid model and Hospital D's digital integration contrast with Hospital B's rigid six-tier hierarchy and Hospitals C's fixed cluster-driven structures.

The comparative analysis highlights distinct organizational DNA profiles:

Hospital A: Decentralized, adaptive, and incentive-driven.

Hospital B: Centralized (single-institution pyramidal), vertically structured, and performance-focused.

Hospitals C: Centralized (cluster-level), rigid, and under-documented regarding communication and financial motivators.

Hospital D: Transparent, loyalty-focused, and committee-driven with digital innovation.

These findings underscore the influence of policy frameworks and cultural contexts on organizational DNA, offering insights into how Saudi healthcare institutions can align governance, communication, motivation, and structure with Vision 2030 goals.

3.4 Discussion

The present study explored the organizational DNA of four major healthcare systems in Saudi Arabia—Hospital A, Hospital B, Hospitals C, and Hospital D—through a narrative qualitative design supported by systematic review of policy documents. The findings highlight both shared and divergent organizational traits across the four DNA dimensions: decision rights, information flow, motivators, and organizational structure, while illustrating how variations in institutional documentation shape comparative governance assessments.

Interpretation of Findings

Decision Rights

Hospital A demonstrated a decentralized model, with ministerial delegation enabling the CEO to exercise authority over supervisory appointments and restructuring. This aligns with international evidence suggesting that decentralization is associated with responsiveness and operational efficiency (Simon, 1997; Mintzberg, 1979). In contrast, Hospital B and Hospitals C exhibited centralized governance, with decision-making concentrated at the institutional executive level (Hospital B) or the overarching cluster level (Hospitals C). Such centralization, while supporting procedural consistency and regulatory control, may constrain agility and local innovation. Hospital D presented a hybrid approach, where decision rights were exercised through program boards and committees, reflecting a balance between authority and participatory governance that can support cross-functional adaptability and shared accountability.

Information Flow

Structured communication policies at Hospital A and Hospital D supported transparency and role accountability, consistent with Daft and Lengel's (1986) media richness theory. Hospital B's vertical communication channels reinforced hierarchical clarity and scope-of-service compliance but risked limiting cross-functional collaboration. Hospitals C, by contrast, lacked documented communication frameworks in the reviewed records, coinciding with narratives of fragmented information flow. In complex healthcare networks, codified multi-directional communication pathways are closely linked to institutional excellence by minimizing coordination delays and supporting patient safety.

Motivators

Hospital A and Hospital D integrated monetary and non-monetary incentives, providing structural conditions linked to employee engagement and aligning with Herzberg's motivation-hygiene theory (1968). Hospital B emphasized performance-linked motivators, including forced ranking and competency-based scoring, which reinforce accountability but risk undermining

morale if perceived as punitive. Hospitals C relied primarily on non-monetary recognition in available documentation, which may present challenges for staff satisfaction and retention during large-scale cluster integration. Balanced incentive systems that combine financial rewards with recognition and career development opportunities are widely recognized as key enablers of sustained workforce engagement.

Organizational Structure

Hospital A's hybrid structure allowed periodic review and adaptation to strategic goals, reflecting Burns and Stalker's (1961) model of organic organizations suited to dynamic environments. Hospital B's rigid pyramidal hierarchy ensured clarity of command but limited flexibility, while Hospitals C maintained fixed structures aligned with cluster-level governance. Hospital D demonstrated innovation through committee-based leadership and HIM-driven digital systems, integrating structural clarity with technological adaptability. Taken together, decentralized decision rights, structured information flow, balanced motivators, committee-based governance, and digital integration appear to reinforce organizational adaptability and employee engagement—two core pillars of institutional excellence under Vision 2030.

Comparison with Existing Literature

The findings resonate with prior studies linking organizational DNA to institutional excellence (Elsakaan et al., 2021). Similar to the Alexandria petroleum sector, Saudi healthcare institutions demonstrate that decision rights, communication, motivators, and structure collectively frame organizational functioning. However, this study extends the literature by situating organizational DNA within a healthcare context and a national transformation agenda, highlighting how regulatory and cultural environments mediate organizational traits across single-hospital and multi-hospital cluster models.

Strengths and Limitations

key strength of this study is its multi-institutional comparative design, which provides nuanced insights into organizational DNA across diverse healthcare systems. The use of narrative research enriched the analysis by capturing institutional stories and contextual histories. However, several methodological limitations must be acknowledged. First, the study relied exclusively on retrospective policy documents, organizational charts, and secondary institutional narratives; consequently, the findings reflect formally codified governance structures rather than the lived experiences or informal daily practices of frontline clinicians and staff. Second, institutional documentation practices varied substantially across the four systems—particularly in newly consolidated cluster networks such as Hospitals C—meaning that the absence of documented policies in a given dimension indicates an evidentiary gap rather than definitive proof that informal practices do not occur. Third, because this is a qualitative documentary study, it identifies structural patterns and theoretical associations rather than establishing causal relationships between organizational DNA traits and clinical or financial performance metrics. Future studies should integrate qualitative interviews, surveys, and ethnographic methods to triangulate findings and deepen understanding of organizational DNA in practice.

Implications for Policy and Practice

Within the scope of documentary governance analysis, the study underscores the importance of aligning codified organizational DNA with Vision 2030 goals. Clear delegation thresholds, structured communication frameworks, balanced and transparent motivators, and adaptive or digitally enabled organizational structures emerge as promising governance mechanisms for institutional excellence. Specifically, healthcare policymakers and cluster leaders should consider formalizing standardized communication policies across regional health clusters (such as Hospitals C), clarifying delegation boundaries between cluster executives and hospital directors, and ensuring that reward and appraisal frameworks are transparently documented across all facilities.

Recommendations for Future Research:

Further research should examine organizational DNA across additional healthcare sectors, including private hospitals and regional health directorates, and extend comparisons to international contexts. Mixed-methods studies combining documentary analysis with staff interviews and validated organizational performance indicators are needed to test empirical relationships, while longitudinal studies will help assess how organizational DNA evolves under ongoing reforms, particularly in response to digital transformation and workforce diversification.

4. CONCLUSION

This study examined the organizational DNA of four major healthcare systems in Saudi Arabia—Hospital A, Hospital B, Hospitals C, and Hospital D—through a narrative qualitative design supported by systematic review of policy documents. By analyzing the four DNA dimensions of decision rights, information flow, motivators, and organizational structure, the research revealed distinct institutional profiles shaped by governance frameworks, communication practices, incentive systems, and structural models.

The findings demonstrate that Hospital A's decentralized and adaptive model supports flexibility and executive empowerment, while Hospital B's pyramidal hierarchy emphasizes performance accountability and vertical clarity but limits agility. Hospitals C reflect cluster-level centralized governance with under-documented motivators and communication policies, highlighting priority areas for governance documentation and policy development. In contrast, Hospital D's committee-driven and digitally integrated structure illustrates transparency, loyalty, and innovation.

These insights extend existing literature by situating organizational DNA within the healthcare context of Saudi Arabia and linking it to the broader national transformation agenda under Vision 2030. The study underscores the importance of aligning formal organizational DNA with institutional excellence, suggesting that clear decentralization, structured communication, balanced motivators, participatory committees, digital integration, and adaptive structures provide supportive institutional conditions for resilience and organizational adaptability.

While the reliance on documented policies provided a robust comparative framework, variation in institutional documentation practices and the absence of primary interview data limit our ability to capture lived experiences or infer causal performance outcomes. Future research should incorporate qualitative interviews, ethnographic methods, and longitudinal designs to explore how organizational DNA evolves under ongoing reforms and digital transformation.

In conclusion, organizational DNA is codified in policies and reflected through institutional narratives. Understanding these narratives provides a practical diagnostic framework for strengthening governance transparency, supporting employee engagement, and advancing strategic alignment in healthcare systems undergoing transformation.

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AUTHOR CONTRIBUTIONS

Halabi Alzahraa: Conceptualization, study design, data collection, thematic analysis, manuscript drafting. **Abu Ruzaizah Raghad:** Systematic review, policy document screening, data extraction, and comparative synthesis. **Maqbul Khadijah:** Validation of coding framework, independent review, and critical revision of the manuscript. **Alabdali Manal & Hawsawi Hala:** Literature review, reference management, and formatting according to journal guidelines. All authors read and approved the final manuscript.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

Ethics Statement

IRB Waiver: As per KAMC IRB guidelines, consent waiver was requested since the study involved retrospective analysis of existing documents without patient-level data. The IRB approval **No. 25-1466** granted **at 17 of Aug 2025**.

Data Availability Statement

Policy-Based Data: No human participants were directly involved; data were derived from published policies and documents. Systematic Review: Only publicly available literature was included. Confidentiality: Institutional documents were anonymized where necessary, with sensitive information coded.

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