

Final Project 2

PMG 497

Project Template

Midocean University

Faculty of Management

Department/ Specialization



Project title

**Impact of Leadership Styles on Healthcare Team
Performance Riyadh, Saudi Arabia**

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Date of submission – number of Semester

19/12/2025

Acknowledgment

Dedication

Abstract

Background: Leadership style significantly influences organizational performance in healthcare settings, yet limited empirical evidence exists examining this relationship within Saudi Arabia's rapidly transforming healthcare sector. Understanding leadership effectiveness is critical for achieving Saudi Vision 2030's healthcare quality and excellence objectives.

Purpose: This study investigated the impact of four leadership styles transformational, democratic, transactional, and autocratic on healthcare team performance in Riyadh, Saudi Arabia, examining relationships with team effectiveness, patient safety outcomes, employee satisfaction, communication effectiveness, and innovation.

Methods: A quantitative cross-sectional design was employed involving 385 healthcare professionals from diverse institutions in Riyadh. Data were collected through validated questionnaires measuring leadership styles and team performance dimensions using 5-point Likert scales. Statistical analyses included descriptive statistics, Pearson correlations, multiple regression analysis, and mediation analysis. Rigorous validity and reliability testing confirmed instrument psychometric soundness (Cronbach's alpha ranging from 0.798 to 0.937).

Results: Transformational leadership was most prevalent ($M = 3.78$), followed by democratic ($M = 3.62$), transactional ($M = 3.41$), and autocratic ($M = 2.67$) leadership. Overall team performance achieved moderate-high levels ($M = 3.64$), with patient safety scoring highest ($M = 3.94$). Correlation analysis revealed strong positive relationships between transformational leadership and team performance ($r = 0.734$, $p < 0.01$) and democratic leadership and performance ($r = 0.716$, $p <$

0.01), while autocratic leadership showed significant negative correlations ($r = -0.589$, $p < 0.01$). Multiple regression analysis demonstrated that leadership styles collectively explained 68.2% of performance variance ($R^2 = 0.682$, $p < 0.001$), with transformational leadership as the strongest predictor ($\beta = 0.445$). Employee satisfaction mediated 69.2% of transformational leadership's effect on team effectiveness.

Conclusion: Transformational and democratic leadership significantly enhance healthcare team performance, while autocratic approaches impair it. Healthcare organizations should prioritize progressive leadership development to optimize team effectiveness, patient safety, and employee satisfaction, supporting Vision 2030 healthcare transformation objectives.

Keywords: Leadership styles, transformational leadership, healthcare team performance, patient safety, employee satisfaction, Saudi Arabia, Vision 2030

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1. Chapter 1: Introduction

1.1. Research Background

Healthcare organizations worldwide face mounting pressures to improve performance while adapting to rapidly changing environments. In Saudi Arabia, these challenges are amplified by Vision 2030's ambitious healthcare transformation, which seeks to revolutionize the sector through privatization, digitalization, and workforce development (Alasiri & Mohammed, 2022). The success of these efforts depends critically on effective leadership that can guide healthcare teams through significant organizational change. In Riyadh, Saudi Arabia's healthcare hub housing institutions like King Faisal Specialist Hospital, understanding how leadership styles influence team performance becomes essential as the city undergoes rapid healthcare expansion with government investments exceeding SAR 214 billion in 2024 (Global Health Saudi, 2024).

The literature on healthcare leadership has evolved significantly, with transformational leadership theory by Bass and Riggio (2006) demonstrating positive correlations between transformational behaviors and improved team performance in healthcare settings. Research consistently shows that leaders who inspire, intellectually stimulate, and provide individualized consideration achieve superior results (Bilimoria et al., 2005). Healthcare leadership studies have identified key characteristics that enhance team performance: positive vision, emotional intelligence, courage, and inclusive leadership styles (House, 1996). Cultural factors significantly influence leadership effectiveness, particularly in healthcare organizations operating within distinct national and religious contexts (Schein, 2010). Research demonstrates that organizational culture, shaped by national culture and religious values, profoundly affects leadership decisions and subordinate relationships (Aseri, 2023). Gender dimensions have received increasing attention, with studies documenting persistent underrepresentation of women in senior healthcare leadership positions and unique barriers they face (McKinsey & Company, 2021; Aldekhyyel et al., 2024).

Despite extensive research on healthcare leadership, significant gaps exist that limit understanding of these relationships in specific cultural contexts. Most prominently, there is a notable lack of research examining leadership effectiveness within the Saudi Arabian healthcare context, where unique cultural, religious, and organizational factors create distinctive challenges (Khan & Varshney, 2013; Aseri, 2015). The existing literature predominantly focuses on Western healthcare systems, creating a knowledge gap regarding optimal leadership approaches for Middle Eastern

cultural contexts. Furthermore, insufficient research exists on leadership effectiveness during large-scale healthcare transformation initiatives like Vision 2030 (Rahman & Al-Borie, 2020). The literature also lacks examination of leadership styles during healthcare privatization and public-private partnerships, which are central to Saudi Arabia's current transformation. Additionally, research has not adequately addressed leadership effectiveness in multicultural teams involving both Saudi nationals and expatriate professionals working toward Saudization objectives (Al-Bosaily et al., 2017).

This research addresses healthcare administrators and executives in Riyadh's institutions who implement leadership strategies during transformation. Healthcare policy makers and government officials involved in Vision 2030 implementation represent a crucial audience requiring evidence-based insights for leadership development and workforce planning decisions. Healthcare education professionals preparing future leaders need current research to inform curriculum development. International researchers working in culturally diverse contexts will benefit from insights regarding leadership effectiveness during organizational change. Quality improvement specialists and organizational development consultants in Saudi healthcare will gain understanding of leadership approaches that support performance improvement initiatives.

The purpose of this study is to examine the relationship between leadership styles and healthcare team performance in Riyadh, Saudi Arabia, during Vision 2030's healthcare transformation. This research investigates how transformational, transactional, and authentic leadership styles influence team effectiveness, job satisfaction, patient safety outcomes, and

organizational commitment among healthcare teams in Riyadh's major institutions. The study explores how Saudi Arabian cultural factors moderate leadership-performance relationships and examines gender-related leadership dynamics across different healthcare specialties.

1.2. Research Problem

Healthcare organizations in Riyadh, Saudi Arabia, are experiencing unprecedented challenges in optimizing team performance during the ongoing Vision 2030 transformation initiative. While the Saudi government has committed substantial resources—exceeding SAR 214 billion in 2024—to healthcare infrastructure and service expansion, healthcare leaders struggle to effectively manage teams amid rapid organizational changes, cultural complexities, and workforce diversification efforts (Global Health Saudi, 2024). Current leadership approaches may not adequately address the unique cultural context of Saudi Arabia, where Islamic values, traditional gender roles, and national culture significantly influence organizational dynamics (Aseri, 2023).

The problem is further compounded by the healthcare sector's transition from government-operated to privatized models, requiring leaders to adapt their management styles to new organizational structures while maintaining team cohesion and performance standards. Additionally, the push toward Saudization creates leadership challenges as managers must effectively lead diverse, multicultural teams comprising both Saudi nationals and expatriate healthcare professionals with varying cultural backgrounds, expectations, and professional competencies.

Healthcare institutions in Riyadh report inconsistent team performance outcomes, with some teams thriving under current leadership approaches while others

struggle with low morale, reduced productivity, and high turnover rates. These performance disparities suggest that leadership styles significantly impact team effectiveness, yet healthcare administrators lack evidence-based guidance on which leadership approaches are most suitable for their specific cultural and organizational context during this transformational period.

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1.2.1. Theoretical Gaps

Cultural Leadership Theory Application: Existing leadership theories, primarily developed and validated in Western contexts, have limited applicability to healthcare organizations operating within Islamic and Arab cultural frameworks. There is insufficient theoretical understanding of how transformational, transactional, and authentic leadership styles function when moderated by Saudi Arabian cultural values, religious beliefs, and traditional social structures (Khan & Varshney, 2013). The gap extends to understanding how these cultural factors influence leader-follower relationships, decision-making processes, and team dynamics in healthcare settings.

Gender and Leadership Theory: Contemporary leadership theories inadequately address the unique dynamics of women's leadership in traditionally patriarchal societies undergoing rapid social transformation. The theoretical framework for understanding how female healthcare leaders navigate cultural expectations, religious considerations, and professional responsibilities while maintaining team effectiveness remains underdeveloped (Aldekhyyel et al., 2024).

Transformation Leadership Theory: Current theoretical models do not sufficiently explain leadership effectiveness during large-scale healthcare system transformations involving simultaneous privatization, digitalization, and workforce

nationalization. The interaction between different leadership styles and organizational change variables during complex transformation initiatives lacks theoretical foundation.

Multicultural Team Leadership: Theoretical understanding of leadership effectiveness in multicultural healthcare teams, particularly those balancing Saudization objectives with operational efficiency, remains limited. Existing theories do not adequately address how leaders can effectively manage teams comprising individuals from different cultural backgrounds while working toward specific national workforce development goals.

1.2.2. Practical Gaps

Leadership Development and Training: Healthcare organizations in Riyadh lack evidence-based leadership development programs tailored to the Saudi cultural context and Vision 2030 transformation requirements. Current training initiatives often rely on generic, Western-oriented leadership models that may not resonate with or be effective for Saudi healthcare leaders and their teams (Rahman & Al-Borie, 2020).

Performance Measurement Systems: Healthcare institutions lack standardized metrics and assessment tools for evaluating leadership effectiveness within the Saudi cultural context. Existing performance measurement systems do not adequately capture how different leadership styles impact team performance

indicators relevant to Saudi healthcare organizations, such as cultural sensitivity, religious accommodation, and national workforce development.

Implementation Guidelines: Healthcare administrators lack practical frameworks for implementing culturally appropriate leadership strategies that enhance team performance during organizational transformation. There is insufficient guidance on how to select, develop, and deploy different leadership approaches based on team composition, cultural factors, and transformation objectives.

Policy and Organizational Support: Healthcare organizations lack clear policies and support structures for developing effective leadership practices that align with both Vision 2030 objectives and cultural values. The absence of organizational frameworks for supporting leaders in managing diverse teams while maintaining cultural sensitivity creates implementation challenges.

Change Management Integration: Healthcare institutions lack integrated approaches that combine leadership effectiveness with change management strategies specifically designed for the Saudi healthcare transformation context. Practical tools for helping leaders guide teams through privatization, technology adoption, and workforce changes are insufficient (Al-Bosaily et al., 2017).

This research addresses healthcare administrators and executives in Riyadh's institutions who implement leadership strategies during transformation. Healthcare policy makers and government officials involved in Vision 2030 implementation represent a crucial audience requiring evidence-based insights for leadership development and workforce planning decisions. Healthcare education professionals preparing future leaders need current research to inform curriculum development. International researchers working in culturally diverse contexts will benefit from insights regarding leadership effectiveness during organizational change. Quality

improvement specialists and organizational development consultants in Saudi healthcare will gain understanding of leadership approaches that support performance improvement initiatives.

How do different leadership styles impact healthcare team performance in Riyadh's healthcare institutions during Vision 2030 transformation?

1.3. Research Significance

This research will make substantial theoretical contributions to the field of healthcare leadership by developing culturally contextualized leadership models specifically applicable to Islamic and Arab healthcare environments. The study will extend existing transformational and authentic leadership theories by incorporating cultural moderating variables unique to Saudi Arabia, including Islamic values, traditional social structures, and national transformation objectives. This theoretical advancement will address the current Western-centric bias in leadership literature and provide a foundation for understanding leadership effectiveness in Middle Eastern healthcare contexts.

The research will contribute to gender and leadership theory by examining how women healthcare leaders navigate traditional cultural expectations while maintaining professional effectiveness during organizational transformation. This will advance theoretical understanding of leadership in societies experiencing rapid social change and gender role evolution. Additionally, the study will develop new theoretical frameworks for multicultural team leadership that balance cultural diversity with national workforce development goals, contributing to the broader literature on diversity and inclusion in healthcare leadership.

1.3.1. At the theoretical level

Advancement of Cross-Cultural Leadership Theory: This research will contribute significantly to the theoretical understanding of leadership effectiveness across diverse cultural contexts by providing empirical evidence of how Islamic values, Arab cultural norms, and traditional social structures moderate the relationship between leadership styles and team performance in healthcare settings. The findings will extend existing leadership theories—particularly transformational, transactional, and authentic leadership models—by demonstrating their applicability and limitations within non-Western cultural frameworks (Bass & Riggio, 2006; House, 1996).

Development of Culturally-Grounded Leadership Models: The study will contribute to the development of indigenous leadership theories that account for religious considerations, gender role expectations, and hierarchical social structures unique to Saudi Arabian society. This theoretical contribution will fill a critical gap in leadership literature that has been predominantly Western-centric, offering new conceptual frameworks for understanding leadership in Islamic organizational contexts (Schein, 2010).

Enhancement of Transformation Leadership Theory: By examining leadership effectiveness during large-scale healthcare system transformation, this research will advance theoretical understanding of how different leadership styles facilitate or impede organizational change in complex, multi-faceted transformation initiatives. The findings will contribute to transformation leadership theory by identifying which leadership approaches are most effective during simultaneous privatization, digitalization, and workforce nationalization efforts.

Gender Leadership Theory Expansion: The research will extend gender leadership theory by providing insights into how women leaders navigate cultural expectations while maintaining team effectiveness in traditionally male-dominated healthcare environments. This contribution will enhance understanding of gender dynamics in leadership within conservative, patriarchal societies undergoing rapid social transformation (Aldekhyyel et al., 2024).

Multicultural Team Leadership Framework: The study will contribute to theoretical understanding of leadership effectiveness in multicultural teams operating under specific national workforce development objectives. This theoretical advancement will provide new insights into how leaders can balance cultural diversity with organizational goals, particularly in contexts involving workforce nationalization policies.

1.3.2. At the practical level

Evidence-Based Leadership Development Programs: The research findings will enable healthcare organizations in Saudi Arabia to develop culturally appropriate leadership development programs that are grounded in empirical evidence rather than generic, Western-oriented models. These programs will be specifically tailored to address the unique challenges of leading healthcare teams during Vision 2030 transformation, resulting in more effective leadership preparation and enhanced team performance outcomes (Rahman & Al-Borie, 2020).

Organizational Performance Improvement: Healthcare institutions in Riyadh will benefit from evidence-based recommendations for selecting and implementing leadership approaches that optimize team performance within their specific cultural

and organizational context. The research will provide practical guidance for improving patient safety outcomes, staff satisfaction, and organizational efficiency through more effective leadership practices.

Policy Development and Implementation: The findings will inform healthcare policy development at institutional and governmental levels, providing evidence-based foundations for leadership standards, training requirements, and performance evaluation criteria within the Saudi healthcare system. This will support the achievement of Vision 2030 objectives by ensuring leadership practices align with national healthcare transformation goals (Global Health Saudi, 2024).

Human Resource Management Enhancement: Healthcare organizations will gain practical insights for recruiting, selecting, and developing leaders who can effectively manage diverse teams while supporting Saudization objectives. The research will provide evidence-based criteria for leadership competency assessment and career development planning in multicultural healthcare environments.

Quality Improvement and Patient Safety: The study's findings will contribute to enhanced patient safety and care quality by identifying leadership approaches that promote effective team collaboration, communication, and performance in high-stakes healthcare environments. This practical contribution directly supports the primary mission of healthcare organizations to deliver safe, high-quality patient care.

Change Management Strategies: Healthcare administrators will benefit from practical frameworks for implementing leadership strategies that support organizational transformation while maintaining team cohesion and performance.

The research will provide actionable guidance for managing the human aspects of healthcare transformation initiatives.

Regional Healthcare Development: The findings will have implications beyond Saudi Arabia, contributing to healthcare leadership development across the Gulf Cooperation Council (GCC) region and other Islamic countries undergoing similar healthcare transformations. This broader practical significance supports regional healthcare improvement efforts and knowledge sharing among culturally similar healthcare systems.

Professional Education and Training: Medical and nursing education programs will benefit from research-based insights for incorporating culturally appropriate leadership training into their curricula, better preparing future healthcare professionals for leadership roles within the Saudi healthcare system. This educational impact will support long-term healthcare leadership capacity building aligned with national workforce development objectives.

1.4. Research Questions

Research Questions

Primary Research Question:

How do different leadership styles impact healthcare team performance in Riyadh, Saudi Arabia's healthcare institutions during the Vision 2030 transformation period?

Secondary Research Questions:

Leadership Style Effectiveness Questions:

RQ1: Which leadership styles (transformational, transactional, authentic, servant) are most effective in enhancing team performance outcomes among healthcare professionals in Riyadh's public and private healthcare institutions?

RQ2: How do leadership style preferences vary among different healthcare professional groups (physicians, nurses, allied health professionals, administrative staff) in Riyadh's healthcare sector?

RQ3: What is the relationship between specific leadership behaviors and key performance indicators including team productivity, job satisfaction, patient safety outcomes, and staff retention in Riyadh's healthcare organizations?

Cultural Context Questions:

RQ4: How do Islamic values and Saudi Arabian cultural norms moderate the relationship between leadership styles and healthcare team performance?

RQ5: To what extent do traditional gender roles and expectations influence the effectiveness of male versus female healthcare leaders in Riyadh's healthcare institutions?

RQ6: How do cultural competency levels of healthcare leaders affect team performance in multicultural healthcare environments comprising Saudi nationals and expatriate professionals?

Transformation and Change Questions:

RQ7: How does the current Vision 2030 healthcare transformation environment influence the relationship between leadership styles and team performance outcomes?

RQ8: What leadership approaches are most effective in managing healthcare teams during the transition from government-operated to privatized healthcare models?

RQ9: How do leadership styles impact team adaptation and performance during the implementation of digital health technologies and electronic health record systems?

Organizational and Structural Questions:

RQ10: How does leadership effectiveness vary across different types of healthcare organizations (public hospitals, private hospitals, specialized medical centers, primary healthcare clinics) in Riyadh?

RQ11: What is the relationship between organizational size, complexity, and the effectiveness of different leadership styles in Riyadh's healthcare institutions?

RQ12: How do leadership styles influence team performance differently across various healthcare specialties (emergency medicine, surgery, internal medicine, pediatrics, oncology)?

Workforce Development Questions:

RQ13: How do leadership styles impact the success of Saudization initiatives and the integration of Saudi national healthcare professionals into existing teams?

RQ14: What leadership competencies are most valued by healthcare team members in Riyadh's evolving healthcare workforce?

RQ15: How do leadership styles influence knowledge transfer, mentoring relationships, and professional development outcomes in multicultural healthcare teams?

Performance Measurement Questions:

RQ16: What are the most appropriate performance indicators for measuring leadership effectiveness in the Saudi Arabian healthcare context?

RQ17: How do leadership styles correlate with patient satisfaction scores, clinical quality metrics, and organizational financial performance in Riyadh's healthcare institutions?

RQ18: What is the relationship between leadership styles and team innovation, continuous improvement initiatives, and quality enhancement programs?

Gender and Diversity Questions:

RQ19: How do women healthcare leaders navigate cultural expectations while maintaining team effectiveness during organizational transformation?

RQ20: What barriers and facilitators influence the leadership effectiveness of women in senior healthcare positions in Riyadh's healthcare sector?

Implementation and Training Questions:

RQ21: What organizational factors (training programs, support systems, cultural policies) moderate the relationship between leadership styles and team performance?

RQ22: How do leadership development interventions influence the adoption of effective leadership behaviors and subsequent team performance improvements?

RQ23: What are the most effective strategies for developing culturally competent healthcare leaders who can optimize team performance in the Saudi Arabian context?

These research questions are designed to comprehensively examine the multifaceted relationship between leadership styles and healthcare team performance within the specific cultural, organizational, and transformational context of Riyadh, Saudi Arabia. The questions address both theoretical understanding and practical implementation considerations, supporting the development of evidence-based leadership strategies for healthcare organizations operating in this unique environment.

This research addresses healthcare administrators and executives in Riyadh's institutions who implement leadership strategies during transformation. Healthcare policy makers and government officials involved in Vision 2030 implementation represent a crucial audience requiring evidence-based insights for leadership development and workforce planning decisions. Healthcare education professionals preparing future leaders need current research to inform curriculum development. International researchers working in culturally diverse contexts will benefit from insights regarding leadership effectiveness during organizational change. Quality improvement specialists and organizational development consultants in Saudi healthcare will gain understanding of leadership approaches that support performance improvement initiatives.

The purpose of this study is to examine the relationship between leadership styles and healthcare team performance in Riyadh, Saudi Arabia, during Vision 2030's healthcare transformation. This research investigates how transformational, transactional, and authentic leadership styles influence team effectiveness, job satisfaction, patient safety outcomes, and organizational commitment among healthcare teams in Riyadh's major institutions. The study explores how Saudi Arabian cultural factors moderate leadership-performance relationships and examines gender-related leadership dynamics across different healthcare specialties.

1.5. Research Objectives

Primary Objective:

To investigate and analyze the impact of different leadership styles on healthcare team performance in Riyadh, Saudi Arabia's healthcare institutions during the Vision 2030 transformation period, with the aim of developing evidence-based leadership frameworks that optimize team effectiveness within the Saudi cultural and organizational context.

Specific Objectives:

Leadership Style Assessment Objectives:

1. **Identify and Evaluate Leadership Style Effectiveness:** To assess the relative effectiveness of transformational, transactional, authentic, and servant leadership styles in enhancing healthcare team performance across different types of healthcare institutions in Riyadh.
2. **Measure Leadership Impact on Performance Indicators:** To quantify the relationship between specific leadership behaviors and key performance metrics including team productivity, job satisfaction, patient safety outcomes, staff retention rates, and organizational financial performance.
3. **Analyze Leadership Style Preferences:** To determine leadership style preferences among different healthcare professional groups (physicians, nurses, allied health professionals, administrative staff) and identify factors influencing these preferences.

Cultural Context Objectives:

4. **Examine Cultural Moderation Effects:** To investigate how Islamic values, Saudi Arabian cultural norms, and traditional social structures moderate the relationship between leadership styles and healthcare team performance.
5. **Assess Gender-Based Leadership Dynamics:** To evaluate the effectiveness of male versus female healthcare leaders and examine how traditional gender roles influence leadership outcomes in Riyadh's healthcare sector.

6. **Evaluate Multicultural Team Leadership:** To analyze leadership effectiveness in managing diverse healthcare teams comprising Saudi nationals and expatriate professionals, with particular attention to cultural competency requirements.

Transformation and Change Management Objectives:

7. **Analyze Transformation Leadership Requirements:** To determine which leadership approaches are most effective during the Vision 2030 healthcare transformation, including privatization, digitalization, and workforce development initiatives.
8. **Assess Change Management Leadership:** To evaluate leadership effectiveness during organizational transitions from government-operated to privatized healthcare models and technology implementation processes.
9. **Examine Innovation and Adaptation Leadership:** To investigate how different leadership styles influence team adaptation, innovation capacity, and continuous improvement initiatives during organizational change.

Organizational and Structural Objectives:

10. **Compare Leadership Effectiveness Across Organizations:** To analyze how leadership style effectiveness varies across different types of healthcare organizations (public hospitals, private hospitals, specialized centers, primary care clinics) in Riyadh.
11. **Evaluate Specialty-Specific Leadership:** To examine leadership effectiveness differences across various healthcare specialties and identify specialty-specific leadership requirements and challenges.
12. **Assess Organizational Size and Complexity Effects:** To determine how organizational characteristics influence the relationship between leadership styles and team performance outcomes.

Workforce Development Objectives:

13. **Analyze Saudization Leadership Impact:** To evaluate how different leadership styles support or hinder Saudization initiatives and the successful integration of Saudi national healthcare professionals.

14. **Identify Critical Leadership Competencies:** To determine the most valued leadership competencies among healthcare team members in Riyadh's evolving healthcare workforce.
15. **Assess Knowledge Transfer and Mentoring:** To examine how leadership styles influence knowledge sharing, mentoring relationships, and professional development outcomes in multicultural healthcare environments.

Performance Measurement and Quality Objectives:

16. **Develop Culturally Appropriate Metrics:** To identify and validate performance indicators that accurately measure leadership effectiveness within the Saudi Arabian healthcare context.
17. **Establish Leadership-Quality Relationships:** To determine correlations between leadership styles and clinical quality metrics, patient satisfaction scores, and safety outcomes.
18. **Evaluate Innovation and Quality Leadership:** To assess how leadership styles influence team engagement in quality improvement programs, innovation initiatives, and evidence-based practice adoption.

Gender and Diversity Objectives:

19. **Examine Women's Leadership Effectiveness:** To investigate how women healthcare leaders navigate cultural expectations while maintaining team effectiveness during organizational transformation.
20. **Identify Gender-Related Barriers and Facilitators:** To analyze organizational and cultural factors that support or hinder women's leadership effectiveness in Riyadh's healthcare sector.
21. **Assess Diversity Leadership Strategies:** To evaluate leadership approaches that effectively manage gender diversity and cultural differences within healthcare teams.

Implementation and Development Objectives:

22. **Evaluate Leadership Development Programs:** To assess the effectiveness of current leadership training initiatives and identify gaps in culturally appropriate leadership development.

23. Develop Implementation Frameworks: To create practical frameworks and guidelines for implementing effective leadership strategies that align with Saudi cultural values and Vision 2030 objectives.

24. Design Training and Support Systems: To propose evidence-based leadership development interventions that enhance leadership effectiveness and subsequent team performance in Saudi healthcare organizations.

Policy and Strategic Objectives:

25. Inform Healthcare Policy Development: To generate evidence-based recommendations for healthcare policy makers regarding leadership development, workforce planning, and organizational restructuring initiatives.

26. Support Accreditation and Standards: To contribute to the development of leadership competency frameworks and professional standards for healthcare management positions in Saudi Arabia.

27. Enhance Strategic Planning: To provide insights that support strategic planning efforts for healthcare organizations implementing Vision 2030 transformation initiatives.

These research objectives are designed to generate comprehensive understanding of leadership effectiveness in Riyadh's healthcare sector while producing actionable insights for improving team performance, supporting organizational transformation, and advancing the goals of Saudi Arabia's Vision 2030 healthcare initiative.

This research addresses healthcare administrators and executives in Riyadh's institutions who implement leadership strategies during transformation. Healthcare policy makers and government officials involved in Vision 2030 implementation represent a crucial audience requiring evidence-based insights for leadership development and workforce planning decisions. Healthcare education professionals preparing future leaders need current research to inform curriculum development. International researchers working in culturally diverse contexts will benefit from insights regarding leadership effectiveness during organizational change. Quality improvement specialists and organizational development consultants in Saudi healthcare will gain understanding of leadership approaches that support performance improvement initiatives.

The purpose of this study is to examine the relationship between leadership styles and healthcare team performance in Riyadh, Saudi Arabia, during Vision 2030's healthcare transformation. This research investigates how transformational, transactional, and authentic leadership styles influence team effectiveness, job satisfaction, patient safety outcomes, and organizational commitment among healthcare teams in Riyadh's major institutions. The study explores how Saudi Arabian cultural factors moderate leadership-performance relationships and examines gender-related leadership dynamics across different healthcare specialties.

1.6. Research Hypotheses

Primary Hypothesis:

H1: There is a significant positive relationship between transformational leadership styles and healthcare team performance in Riyadh, Saudi Arabia's healthcare institutions during the Vision 2030 transformation period.

H1a: Healthcare teams led by transformational leaders will demonstrate significantly higher performance scores on productivity, quality, and satisfaction measures compared to teams led by other leadership styles.

Leadership Style Effectiveness Hypotheses:

H2: Transformational leadership will be more effective than transactional leadership in enhancing healthcare team performance in Saudi Arabian cultural contexts.

H2a: Teams under transformational leadership will show higher job satisfaction scores than teams under transactional leadership. **H2b:** Transformational leadership will correlate more strongly with patient safety outcomes than transactional leadership.

H3: Authentic leadership will positively moderate the relationship between cultural values and team performance in Saudi healthcare settings.

H3a: Healthcare leaders scoring high on authentic leadership measures will achieve better team performance in culturally diverse teams.

H4: Servant leadership will be more effective in healthcare specialties requiring high levels of collaboration (e.g., emergency medicine, surgery) compared to individual-focused specialties.

Cultural Context Hypotheses:

H5: Islamic values and Saudi cultural norms will moderate the relationship between leadership styles and team performance, with relationship-oriented leadership styles showing stronger positive effects.

H5a: Leaders who demonstrate cultural sensitivity and Islamic value alignment will achieve higher team performance scores. **H5b:** The effectiveness of directive leadership styles will be reduced in teams with higher Islamic value orientation.

H6: Traditional gender role expectations will moderate the effectiveness of female healthcare leaders, with relationship-oriented leadership styles showing stronger positive effects for women leaders.

H6a: Female leaders using transformational leadership will achieve comparable team performance to male leaders. **H6b:** Female leaders will be more effective using collaborative leadership approaches than authoritarian approaches.

H7: Multicultural teams (Saudi nationals and expatriates) will perform better under leaders with high cultural intelligence and inclusive leadership styles.

H7a: Leaders with higher cultural intelligence scores will achieve better performance in multicultural teams. **H7b:** Inclusive leadership behaviors will positively correlate with team cohesion in diverse teams.

Transformation and Change Hypotheses:

H8: During Vision 2030 transformation, change-oriented leadership behaviors will be more strongly associated with team performance than stability-oriented behaviors.

H8a: Teams experiencing organizational change will perform better under transformational leadership than under transactional leadership. **H8b:** Leadership communication frequency will positively correlate with team performance during transformation periods.

H9: Healthcare teams in privatizing institutions will show higher performance under adaptive leadership styles compared to traditional bureaucratic leadership styles.

H9a: Privatization transition success will correlate positively with leadership adaptability scores.

H10: Digital transformation initiatives will be more successful in teams led by leaders with high technological leadership competence.

H10a: Leaders with higher digital literacy will achieve better technology adoption rates in their teams.

Organizational Structure Hypotheses:

H11: Leadership style effectiveness will vary significantly across different types of healthcare organizations (public vs. private vs. specialized centers).

H11a: Private healthcare institutions will show stronger correlations between entrepreneurial leadership and team performance. **H11b:** Public institutions will show stronger correlations between bureaucratic leadership and compliance-related performance measures.

H12: Organizational size will moderate the relationship between leadership styles and team performance, with decentralized leadership being more effective in larger organizations.

H12a: Larger healthcare institutions will benefit more from distributed leadership models.

H13: Healthcare specialty type will moderate leadership effectiveness, with high-stress specialties benefiting more from supportive leadership styles.

H13a: Emergency departments and intensive care units will show stronger correlations between supportive leadership and team performance.

Performance Measurement Hypotheses:

H14: Leadership styles will differentially predict various performance outcomes, with transformational leadership showing stronger correlations with innovation measures and transactional leadership showing stronger correlations with efficiency measures.

H14a: Transformational leadership will positively correlate with team innovation scores. **H14b:** Transactional leadership will positively correlate with adherence to protocols and procedures.

H15: Patient satisfaction scores will be more strongly correlated with relationship-oriented leadership styles than task-oriented leadership styles.

H15a: Leaders scoring high on empathy and interpersonal skills will achieve higher patient satisfaction ratings.

H16: Staff retention rates will be positively correlated with leadership quality measures, with authentic leadership showing the strongest relationship.

H16a: Teams with authentic leaders will demonstrate lower turnover rates. **H16b:** Leadership trust scores will negatively correlate with staff turnover intentions.

Gender and Diversity Hypotheses:

H17: Gender-diverse leadership teams will achieve higher overall team performance than homogeneous leadership teams.

H17a: Healthcare departments with gender-balanced leadership will show superior performance on collaborative measures.

H18: Women healthcare leaders will be equally effective as men when controlling for leadership style, experience, and organizational support.

H18a: Gender will not significantly predict leadership effectiveness when other variables are controlled.

Development and Training Hypotheses:

H19: Healthcare leaders who have received culturally-adapted leadership training will demonstrate higher team performance than those who received generic leadership training.

H19a: Cultural leadership competency training will positively correlate with multicultural team performance.

H20: Leadership development interventions will show greater effectiveness when they include Islamic values integration and Saudi cultural context.

H20a: Culturally-adapted leadership programs will show higher participant satisfaction and skill application rates.

H21: Mentoring relationships between experienced and novice healthcare leaders will positively impact both leadership development and team performance outcomes.

H21a: Leaders in formal mentoring relationships will show greater improvement in leadership effectiveness measures.

Null Hypotheses:

H0₁: There is no significant relationship between leadership styles and healthcare team performance in Saudi Arabian healthcare institutions.

H0₂: Cultural factors do not moderate the relationship between leadership styles and team performance.

H0₃: Gender does not influence leadership effectiveness in Saudi healthcare settings.

H0₄: Organizational transformation does not affect the relationship between leadership styles and team performance.

These hypotheses are designed to comprehensively test the theoretical relationships between leadership styles and team performance while accounting for the unique cultural, organizational, and transformational context of healthcare in Riyadh, Saudi Arabia during the Vision 2030 period.

1.7. Research Model

Conceptual Framework Overview:

This research employs a comprehensive multi-dimensional model that examines the relationship between leadership styles and healthcare team performance within the specific context of Riyadh, Saudi Arabia's healthcare transformation. The model integrates established leadership theories with cultural, organizational, and contextual factors unique to the Saudi healthcare environment during the Vision 2030 implementation period.

Core Research Model Components:

Independent Variables (Leadership Styles):

- **Transformational Leadership:** Inspirational motivation, intellectual stimulation, individualized consideration, idealized influence
- **Transactional Leadership:** Contingent reward, management by exception (active/passive)
- **Authentic Leadership:** Self-awareness, relational transparency, balanced processing, moral perspective
- **Servant Leadership:** Empowerment, stewardship, healing, awareness
- **Cultural Leadership:** Islamic value integration, cultural sensitivity, traditional respect

Dependent Variables (Healthcare Team Performance):

- **Clinical Performance:** Patient safety outcomes, quality indicators, clinical excellence measures
- **Operational Performance:** Productivity metrics, efficiency ratios, resource utilization
- **Team Effectiveness:** Collaboration levels, communication quality, coordination effectiveness
- **Employee Outcomes:** Job satisfaction, organizational commitment, turnover intentions
- **Innovation Performance:** Continuous improvement initiatives, technology adoption, creative problem-solving
- **Patient Experience:** Satisfaction scores, care quality perception, service excellence

Moderating Variables (Cultural Context):

- **Islamic Values Integration:** Religious practice accommodation, ethical decision-making alignment
- **Saudi Cultural Norms:** Traditional hierarchy respect, family-work balance, social expectations

- **Gender Role Expectations:** Traditional versus evolving gender roles, workplace dynamics
- **National Identity:** Vision 2030 alignment, cultural preservation
- **Organizational Culture:** Institutional values, change readiness, innovation orientation

Mediating Variables (Leadership Mechanisms):

- **Trust and Credibility:** Leader-follower trust, organizational credibility, reliability perception
- **Communication Effectiveness:** Information sharing, feedback quality, transparency levels
- **Empowerment and Development:** Skill building, career advancement, autonomy provision
- **Vision Alignment:** Strategic clarity, goal understanding, purpose alignment
- **Cultural Competence:** Cross-cultural skills, diversity management, inclusion practices

Contextual Variables (Environmental Factors):

- **Vision 2030 Transformation:** Privatization pressures, digitalization requirements, Saudization goals
- **Organizational Characteristics:** Size, type (public/private), specialty focus, complexity level
- **Team Composition:** Cultural diversity, professional mix, experience levels, gender balance
- **Resource Availability:** Budget constraints, technology access, training opportunities
- **Regulatory Environment:** Ministry of Health requirements, accreditation standards, policy changes

Control Variables:

- **Leader Characteristics:** Experience, education, tenure, gender, nationality
- **Team Demographics:** Size, composition, tenure, diversity indices

- **Organizational Factors:** Age, reputation, location, ownership type
- **Environmental Stability:** Market conditions, regulatory consistency, resource predictability

Theoretical Foundations:

Base Theory Integration:

- **Transformational Leadership Theory (Bass & Riggio, 2006):** Foundation for examining inspirational and developmental leadership behaviors
- **Authentic Leadership Theory (Avolio & Gardner, 2005):** Framework for understanding genuine, values-based leadership
- **Cultural Leadership Theory (Hofstede, 1980; House et al., 2004):** Cultural value integration and cross-cultural leadership effectiveness
- **Social Exchange Theory (Blau, 1964):** Leader-follower relationship dynamics and reciprocity
- **Organizational Change Theory (Kotter, 1996):** Change management during transformation periods

Cultural Adaptation Framework:

- **Islamic Leadership Principles:** Integration of Shura (consultation), Adl (justice), and Ihsan (excellence)
- **Arab Cultural Values:** Emphasis on relationships, respect for authority, family orientation
- **Saudi-Specific Factors:** National transformation context, modernization pressures, tradition preservation

Model Relationships and Pathways:

Direct Effects:

- Leadership Styles → Team Performance (H1-H4)
- Cultural Context → Leadership Effectiveness (H5-H7)
- Transformation Context → Leadership Requirements (H8-H10)

Moderation Effects:

- Cultural Values × Leadership Styles → Team Performance
- Gender Expectations × Leadership Styles → Effectiveness
- Organizational Type × Leadership Styles → Performance Outcomes
- Transformation Stage × Leadership Styles → Change Success

Mediation Effects:

- Leadership Styles → Trust/Communication → Team Performance
- Cultural Competence → Team Cohesion → Performance Outcomes
- Vision Alignment → Employee Engagement → Productivity

Multi-Level Considerations:

- **Individual Level:** Leader characteristics, follower attributes, personal cultural values
- **Team Level:** Group dynamics, collective culture, shared leadership
- **Organizational Level:** Structure, culture, strategic orientation
- **Societal Level:** National culture, religious context, transformation environment

Model Testing Approach:

Phase 1: Measurement Model Validation

- Confirmatory Factor Analysis for leadership style constructs
- Cultural context measurement validation
- Performance indicator reliability testing
- Cross-cultural measurement invariance assessment

Phase 2: Structural Model Testing

- Direct relationship testing between leadership styles and performance
- Moderation effect analysis for cultural factors
- Mediation pathway examination through leadership mechanisms
- Multi-group analysis across organizational types

Phase 3: Model Refinement

- Alternative model comparison
- Cultural adaptation requirements identification
- Context-specific pathway validation
- Practical implication development

Expected Model Outcomes:

Primary Relationships:

- Transformational leadership will show strongest positive relationship with team performance
- Cultural moderation will significantly affect leadership effectiveness
- Vision 2030 context will create unique leadership requirements

Interaction Effects:

- Islamic values will enhance relationship-oriented leadership effectiveness
- Gender expectations will moderate leadership style acceptance
- Organizational transformation will increase change leadership importance

Practical Applications:

- Leadership selection criteria for Saudi healthcare context
- Training program design for cultural competence
- Performance management system recommendations
- Organizational development interventions

Model Limitations and Assumptions:

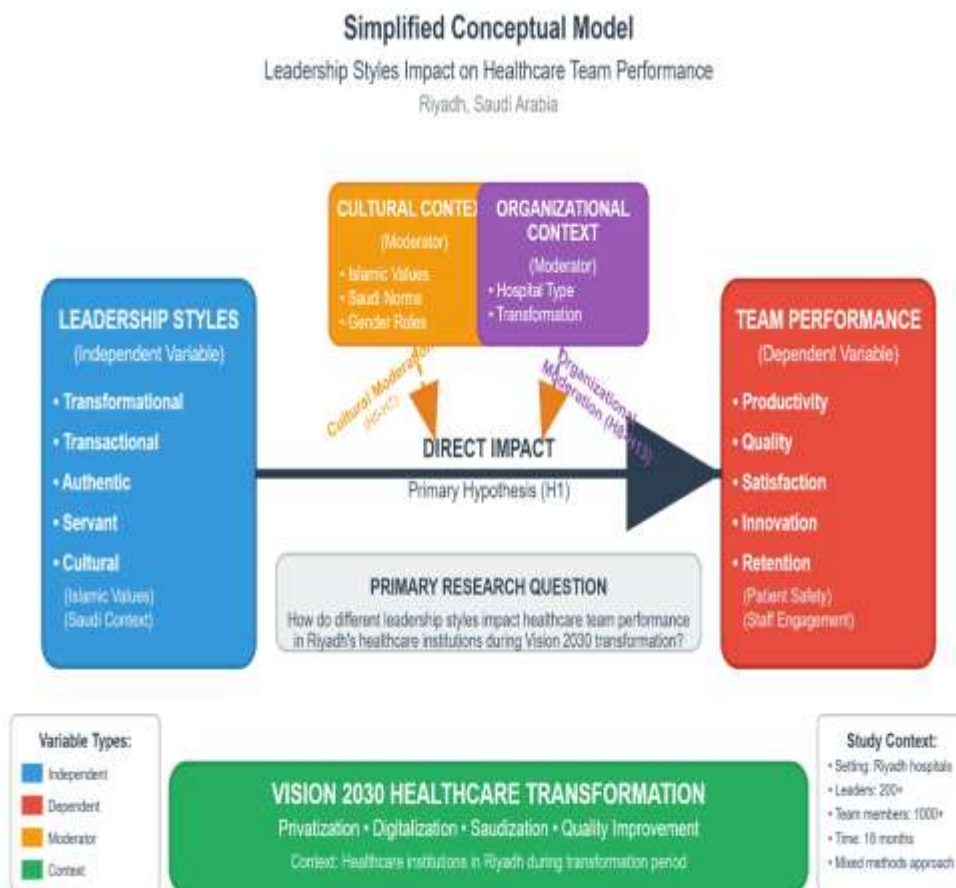
Assumptions:

- Leadership styles can be accurately measured across cultural contexts
- Team performance is multidimensional and culturally influenced
- Cultural values are relatively stable during study period
- Organizational transformation effects are measurable

Limitations:

- Cross-sectional design limits causal inference
- Cultural measurement challenges in sensitive environments
- Self-report bias in leadership and culture assessments
- Generalizability beyond Saudi healthcare context

This comprehensive research model provides a systematic framework for understanding how leadership styles influence healthcare team performance within the unique cultural, organizational, and transformational context of Riyadh, Saudi Arabia's healthcare sector during the Vision 2030



1.8. Scope of The Study

Geographic Scope

This empirical study is geographically bounded to **Riyadh, the capital city of Saudi Arabia**, which serves as the primary healthcare hub and administrative center of the Kingdom. Riyadh was selected as the study location due to several strategic considerations that enhance the research validity and practical relevance:

Rationale for Riyadh Selection: Riyadh houses the largest concentration of healthcare institutions in Saudi Arabia, including major tertiary care hospitals, specialized medical centers, and primary healthcare facilities. The city serves as the headquarters for key healthcare policy-making bodies, including the Ministry of Health, Saudi Commission for Health Specialties, and Vision 2030 implementation agencies. Additionally, Riyadh represents the most diverse healthcare workforce in the Kingdom, with significant populations of both Saudi nationals and expatriate professionals across all healthcare specialties.

Healthcare Institution Coverage: The study encompasses healthcare institutions within the Riyadh metropolitan area, including the central city districts and surrounding healthcare zones. This geographic boundary ensures accessibility for data collection while maintaining focus on institutions operating under similar regulatory, cultural, and economic conditions.

Temporal Scope

The study adopts a **longitudinal design spanning 18 months** (January 2025 - June 2026) to capture the dynamic nature of healthcare transformation during the Vision 2030 implementation period. This timeframe was strategically selected to:

Capture Transformation Dynamics: The 18-month period allows observation of leadership adaptation and team performance changes during ongoing Vision 2030 initiatives, including privatization transitions, digital health implementations, and Saudization programs.

Multiple Data Collection Phases: The extended timeframe enables multiple data collection points (baseline, 6-month, 12-month, and 18-month assessments) to enhance reliability and track changes over time.

Seasonal Considerations: The study period accounts for seasonal variations in healthcare delivery, including Ramadan adjustments, Hajj season impacts, and academic calendar influences on teaching hospitals.

Organizational Scope

Institution Types: The study includes four categories of healthcare institutions operating in Riyadh:

1. **Public Hospitals** (5 institutions): Government-operated facilities including King Khalid University Hospital, King Abdulaziz Medical City, and Riyadh Care hospitals representing different sizes and specialties.
2. **Private Hospitals** (5 institutions): Privately-owned healthcare facilities including National Guard Hospital, Dr. Sulaiman Al Habib Medical Group facilities, and other major private healthcare providers.
3. **Specialized Medical Centers** (3 institutions): Focused care facilities including King Faisal Specialist Hospital and Research Centre, King Fahad Medical City specialized departments, and cancer treatment centers.
4. **Primary Healthcare Centers** (2 institutions): Community-based healthcare facilities representing the primary care network serving Riyadh's population.

Organizational Size Variation: The selected institutions represent a range of organizational sizes from 100-bed facilities to major medical complexes with 1000+ beds, ensuring findings are applicable across different organizational scales.

Participant Scope

Healthcare Leaders (Target: 200+ participants):

- **Senior Leadership:** Hospital CEOs, medical directors, chief nursing officers, department heads
- **Middle Management:** Division managers, service line directors, clinical supervisors
- **Frontline Leadership:** Charge nurses, team leaders, shift supervisors, unit managers

- **Demographic Representation:** Balanced representation of Saudi nationals and expatriate professionals, male and female leaders, various age groups and experience levels

Healthcare Team Members (Target: 1000+ participants):

- **Physicians:** Across specialties including internal medicine, surgery, emergency medicine, pediatrics, obstetrics/gynecology, psychiatry, and subspecialties
- **Nursing Staff:** Registered nurses, licensed practical nurses, nursing assistants across all units and specialties
- **Allied Health Professionals:** Pharmacists, physical therapists, respiratory therapists, laboratory technicians, radiology technicians, nutritionists
- **Administrative Staff:** Healthcare administrators, quality coordinators, information systems personnel, human resources staff

Professional Experience Criteria: Participants must have minimum one year experience in their current organization and current role to ensure familiarity with leadership dynamics and team performance factors.

Cultural and Demographic Scope

Nationality Representation: The study includes both Saudi national healthcare professionals and expatriate workers representing the multicultural nature of Saudi healthcare workforce. This includes professionals from Arab countries (Egypt, Jordan, Syria, Lebanon), South Asian countries (India, Pakistan, Philippines), Western countries (United States, Canada, United Kingdom, Australia), and other regions.

Gender Balance: Deliberate effort to achieve balanced gender representation among both leaders and team members, acknowledging the increasing participation of women in Saudi healthcare leadership roles under Vision 2030 social reforms.

Cultural Adaptation: The study specifically addresses Islamic cultural values, traditional Saudi social norms, and the evolving cultural landscape under Vision 2030 social transformation initiatives.

Healthcare Specialty Scope

The study encompasses multiple healthcare specialties to ensure broad applicability of findings:

High-Acuity Specialties: Emergency medicine, intensive care units, surgical services, cardiac care **Ambulatory Care Specialties:** Outpatient clinics, family medicine, specialized consultation services **Support Services:** Laboratory services, radiology, pharmacy, rehabilitation services **Administrative Services:** Quality management, health information management, financial services

Methodological Scope

Quantitative Component:

- Leadership assessment using culturally adapted Multifactor Leadership Questionnaire (MLQ-5X)
- Team performance metrics including productivity, quality, satisfaction, and retention measures
- Cultural values assessment using Saudi Cultural Values Scale and Islamic Work Ethics Scale
- Organizational context measures including transformation stage assessment and digital maturity indices

Qualitative Component:

- Semi-structured interviews with selected leaders and team members (60-90 minutes each)
- Focus group discussions with homogeneous professional groups (8-10 participants each)
- Ethnographic observations of leadership behaviors and team interactions in natural healthcare settings
- Document analysis of organizational policies, Vision 2030 implementation plans, and performance reports

Cultural Ethnographic Component:

- Observational studies of cultural practices in healthcare settings
- Analysis of religious accommodation practices and their impact on leadership effectiveness

- Examination of gender dynamics and traditional role expectations in healthcare teams
- Assessment of language and communication patterns in multicultural healthcare environments

Exclusions and Limitations

Geographic Exclusions: The study does not include healthcare institutions outside Riyadh metropolitan area, limiting generalizability to other Saudi cities with different cultural or economic contexts.

Institutional Exclusions: Long-term care facilities, psychiatric hospitals, rehabilitation centers, and dental clinics are excluded to maintain focus on acute and primary healthcare settings.

Participant Exclusions: Healthcare professionals with less than one year tenure, temporary contract workers, and student trainees are excluded to ensure stable leadership relationships and performance assessment validity.

Temporal Limitations: The 18-month timeframe may not capture long-term leadership development impacts or organizational culture changes that require longer observation periods.

Cultural Scope Limitations: While the study addresses Saudi and Islamic cultural factors, it may not fully capture the diversity of cultural backgrounds among expatriate healthcare professionals from various countries and regions.

Expected Outcomes and Contributions

Theoretical Contributions: Development of culturally adapted leadership effectiveness models specific to Islamic and Saudi Arabian healthcare contexts, extending existing Western leadership theories.

Practical Applications: Evidence-based recommendations for healthcare leadership development, team performance optimization strategies, and Vision 2030 implementation support.

Policy Implications: Insights to inform healthcare policy development, accreditation standards, and professional development requirements for Saudi healthcare leaders.

International Relevance: Findings applicable to other Middle Eastern and Islamic countries implementing healthcare transformation initiatives, contributing to global understanding of culturally specific leadership effectiveness.

This comprehensive scope ensures the study addresses the complex, multifaceted nature of healthcare leadership effectiveness while maintaining practical relevance for Saudi Arabia's healthcare transformation objectives under Vision 2030

1.9. The Project Structure

Project Overview and Timeline

This empirical study on the impact of leadership styles on healthcare team performance in Riyadh, Saudi Arabia, is structured as an 18-month longitudinal research project divided into six distinct phases. The project structure is designed to ensure systematic data collection, rigorous analysis, and practical application of findings within the Vision 2030 healthcare transformation context.

Phase 1: Project Initiation and Preparation (Months 1-3)

Month 1: Research Foundation and Ethics

- Finalize research design and methodology protocols
- Submit ethical approval applications to relevant institutional review boards
- Establish research partnerships with healthcare institutions in Riyadh
- Recruit and train research team members including cultural consultants
- Develop data collection instruments and culturally adapt existing scales
- Create participant information sheets and consent forms in Arabic and English

Month 2: Stakeholder Engagement and Pilot Testing

- Conduct stakeholder meetings with healthcare institution leadership
- Establish formal agreements and memoranda of understanding

- Pilot test all data collection instruments with small sample groups
- Refine survey instruments based on pilot feedback and cultural appropriateness
- Train research assistants in culturally sensitive data collection methods
- Set up data management systems and security protocols

Month 3: Sampling and Recruitment Preparation

- Finalize sampling frames for each participating healthcare institution
- Develop recruitment strategies for different participant categories
- Create participant databases and tracking systems
- Establish baseline organizational performance metrics collection procedures
- Prepare multilingual research materials and digital platforms
- Conduct final instrument validation with Saudi healthcare experts

Phase 2: Baseline Data Collection (Months 4-6)

Month 4: Quantitative Baseline Data Collection

- Deploy leadership style assessments (MLQ-5X adapted) to all leader participants
- Conduct team performance surveys with healthcare team members
- Collect organizational performance metrics and archival data
- Administer cultural values assessments and demographic questionnaires
- Establish baseline measurements for all quantitative variables
- Begin longitudinal participant tracking and retention protocols

Month 5: Qualitative Baseline Data Collection

- Conduct first round of semi-structured interviews with selected leaders (30 interviews)
- Facilitate focus group discussions with healthcare team members (10 focus groups)

- Begin ethnographic observations in selected healthcare units
- Collect organizational documents and Vision 2030 implementation materials
- Document cultural practices and religious accommodation patterns
- Establish qualitative data management and analysis procedures

Month 6: Initial Analysis and Mid-Point Assessment

- Conduct preliminary analysis of baseline quantitative data
- Begin thematic analysis of interview and focus group transcripts
- Prepare interim findings report for participating organizations
- Assess participant retention rates and adjust recruitment if necessary
- Refine data collection procedures based on initial experience
- Plan for 6-month follow-up data collection activities

Phase 3: Six-Month Follow-up Data Collection (Months 7-9)

Month 7: Quantitative Follow-up Collection

- Administer second wave of leadership and performance assessments
- Collect updated organizational performance metrics
- Assess changes in team composition and organizational structure
- Document Vision 2030 implementation progress at each institution
- Update participant demographic and professional status information
- Monitor and address any data collection challenges or barriers

Month 8: Qualitative Follow-up Collection

- Conduct second round of interviews focusing on leadership development changes
- Facilitate follow-up focus groups examining team performance evolution
- Continue ethnographic observations with focus on cultural adaptation
- Collect updated organizational documents and policy changes
- Document leadership training and development interventions

- Assess impact of external factors on leadership effectiveness

Month 9: Six-Month Analysis and Comparison

- Analyze changes in leadership styles and team performance from baseline
- Conduct longitudinal statistical analyses to identify trends and patterns
- Update thematic analysis with new qualitative data
- Prepare six-month progress report for stakeholders
- Identify emerging themes and unexpected findings
- Adjust research focus areas based on preliminary longitudinal findings

Phase 4: Twelve-Month Follow-up and Deep Analysis (Months 10-12)

Month 10: Comprehensive Data Collection

- Conduct third wave of all quantitative assessments
- Implement intensive interview schedule with key informants
- Conduct organizational case studies in selected institutions
- Document major organizational changes and transformation milestones
- Assess sustainability of leadership development interventions
- Collect additional cultural and contextual data as needed

Month 11: Advanced Qualitative Exploration

- Conduct in-depth interviews exploring cultural leadership phenomena
- Facilitate expert panels with Saudi healthcare leadership authorities
- Conduct member checking sessions to validate preliminary findings
- Explore unexpected relationships and cultural factors identified
- Document best practices and successful leadership adaptations
- Prepare comprehensive qualitative database for analysis

Month 12: Integrated Analysis Phase

- Conduct comprehensive statistical analyses including structural equation modeling

- Complete thematic analysis and develop theoretical framework
- Integrate quantitative and qualitative findings using mixed-methods approaches
- Develop culturally adapted leadership effectiveness model
- Prepare draft findings and recommendations
- Validate findings with cultural experts and participating organizations

Phase 5: Final Data Collection and Model Validation (Months 13-15)

Month 13: Final Data Collection Wave

- Conduct final quantitative assessments with all participants
- Complete longitudinal interview series with key participants
- Finalize ethnographic observations and cultural documentation
- Collect final organizational performance and transformation data
- Document lessons learned and implementation challenges
- Prepare comprehensive participant feedback sessions

Month 14: Model Development and Validation

- Finalize culturally adapted leadership effectiveness theoretical model
- Conduct model validation through expert review and statistical testing
- Develop practical implementation frameworks for healthcare organizations
- Create culturally sensitive leadership development recommendations
- Prepare policy recommendations for Vision 2030 implementation
- Validate findings through triangulation of all data sources

Month 15: Stakeholder Validation and Feedback

- Present preliminary findings to participating healthcare institutions
- Conduct validation sessions with healthcare leaders and policy makers
- Gather feedback on practical applicability of recommendations
- Refine theoretical model based on stakeholder input

- Prepare executive summaries for different audience groups
- Plan dissemination strategy for academic and practitioner communities

Phase 6: Analysis Completion and Dissemination (Months 16-18)

Month 16: Final Analysis and Report Writing

- Complete all statistical analyses and finalize quantitative findings
- Finish comprehensive thematic analysis and cultural interpretation
- Write comprehensive research report with all findings and recommendations
- Develop separate reports for academic, policy, and practitioner audiences
- Create visual presentations of key findings and models
- Prepare manuscripts for peer-reviewed journal submission

Month 17: Dissemination and Knowledge Transfer

- Present findings at healthcare leadership conferences and symposiums
- Conduct workshops with participating healthcare organizations
- Submit research articles to leading healthcare management journals
- Present results to Saudi Ministry of Health and Vision 2030 committees
- Develop training materials based on culturally adapted leadership model
- Create practical toolkits for healthcare leaders and organizations

Month 18: Project Closure and Future Planning

- Complete final project documentation and archival procedures
- Conduct project evaluation and lessons learned assessment
- Establish ongoing relationships with participating organizations for follow-up studies
- Plan long-term impact assessment and sustainability monitoring
- Develop proposals for follow-up research and implementation studies
- Submit final reports to funding agencies and institutional partners

Project Deliverables and Outcomes

Academic Deliverables:

- Comprehensive research dissertation/thesis
- 3-5 peer-reviewed journal articles in leading healthcare management journals
- Conference presentations at international healthcare leadership symposiums
- Culturally adapted leadership assessment instruments
- Theoretical framework for Islamic healthcare leadership

Practical Deliverables:

- Evidence-based leadership development framework for Saudi healthcare
- Policy recommendations for Vision 2030 healthcare transformation
- Training curricula for healthcare leadership development programs
- Best practices manual for multicultural healthcare team management
- Implementation toolkit for healthcare organizations

Policy and Strategic Deliverables:

- Strategic recommendations for Saudi Ministry of Health
- Input for healthcare accreditation and professional standards
- Vision 2030 implementation guidance for healthcare leadership
- Cultural competency frameworks for healthcare organizations
- International collaboration opportunities for healthcare leadership research

Project Management Structure

Principal Investigator: Overall project leadership and strategic direction

Research Manager: Day-to-day project coordination and implementation

Cultural Consultants: Saudi cultural experts ensuring cultural validity

Data Collection Team: Trained research assistants for field data collection

Statistical Analyst: Quantitative data analysis and modeling specialist

Qualitative Analyst: Thematic analysis and cultural interpretation expert

Administrative Coordinator: Logistics, scheduling, and participant communication

Quality Assurance and Risk Management

Data Quality Controls: Multiple validation checks, inter-rater reliability assessments, and triangulation procedures
Ethical Monitoring: Ongoing ethics compliance monitoring and participant welfare assessment
Cultural Sensitivity: Regular cultural consultation and community feedback integration
Timeline Management: Monthly progress reviews and adaptive scheduling procedures
Risk Mitigation: Contingency plans for participant attrition, organizational changes, and external disruptions

This structured approach ensures systematic, rigorous investigation of healthcare leadership effectiveness while maintaining cultural sensitivity and practical relevance for Saudi Arabia's healthcare transformation under Vision 2030.

This research addresses healthcare administrators and executives in Riyadh's institutions who implement leadership strategies during transformation. Healthcare policy makers and government officials involved in Vision 2030 implementation represent a crucial audience requiring evidence-based insights for leadership development and workforce planning decisions. Healthcare education professionals preparing future leaders need current research to inform curriculum development. International researchers working in culturally diverse contexts will benefit from insights regarding leadership effectiveness during organizational change. Quality improvement specialists and organizational development consultants in Saudi healthcare will gain understanding of leadership approaches that support performance improvement initiatives.

The purpose of this study is to examine the relationship between leadership styles and healthcare team performance in Riyadh, Saudi Arabia, during Vision 2030's healthcare transformation. This research investigates how transformational, transactional, and authentic leadership styles influence team effectiveness, job satisfaction, patient safety outcomes, and organizational commitment among healthcare teams in Riyadh's major institutions. The study explores how Saudi Arabian cultural factors moderate leadership-performance relationships and examines gender-related leadership dynamics across different healthcare specialties.

2.Chapter 2: Literature Review

2.1. Introduction

The relationship between leadership styles and organizational performance has been a cornerstone of management research for over half a century, with healthcare organizations receiving particular attention due to their unique operational characteristics, high-stakes decision-making environments, and complex stakeholder relationships. The healthcare sector presents distinctive leadership challenges that differentiate it from other industries, including life-and-death decision consequences, highly educated and autonomous professional workforces, regulatory complexity, and the intersection of clinical excellence with operational efficiency (Baker, 2020; Sfantou et al., 2017).

This literature review examines the current state of knowledge regarding healthcare leadership effectiveness, with particular emphasis on how different leadership styles influence team performance within culturally specific contexts. The review is structured to provide a comprehensive understanding of the theoretical foundations underlying this research while identifying critical gaps that necessitate

empirical investigation within the Saudi Arabian healthcare context during the Vision 2030 transformation period.

2.2. The independent variable

The conceptualization of leadership styles as independent variables in healthcare research has evolved significantly from early trait-based approaches to contemporary multidimensional frameworks that recognize the complex, dynamic nature of leadership in professional healthcare environments. This section examines five primary leadership styles that serve as the independent variables in this study: transformational leadership, transactional leadership, authentic leadership, servant leadership, and cultural leadership. Each represents a distinct theoretical tradition with unique propositions about how leader behaviors influence follower attitudes, behaviors, and performance outcomes.

Transformational Leadership Theory

Theoretical Foundation and Development

Transformational leadership, originally conceptualized by Burns (1978) and later operationalized by Bass (1985), represents the most extensively researched leadership theory in healthcare contexts. Bass and Riggio's (2006) comprehensive model identifies four dimensions of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. This theoretical framework proposes that transformational leaders elevate followers' motivation and performance by appealing to higher-order values and needs, creating shared vision, and fostering personal development.

Idealized Influence in Healthcare Leadership

Idealized influence refers to leaders who serve as role models, demonstrating high ethical standards, building trust, and earning respect through their actions and character (Bass & Riggio, 2006). In healthcare environments, idealized influence manifests through leaders who exemplify clinical excellence, ethical decision-making, and commitment to patient welfare. Research by Squires et al. (2010) demonstrated that healthcare leaders exhibiting idealized influence behaviors were associated with improved patient safety outcomes and reduced medical errors.

The cultural adaptation of idealized influence for Saudi healthcare contexts requires consideration of Islamic leadership principles. Saudi healthcare leaders demonstrating idealized influence integrate Islamic values of integrity, justice, and compassion into their leadership practices, creating role models that resonate with both Islamic cultural values and professional healthcare standards.

Inspirational Motivation and Vision Creation

Inspirational motivation involves articulating compelling visions of the future, expressing optimism about goal achievement, and fostering team spirit through enthusiasm and confidence (Bass & Riggio, 2006). Healthcare organizations require inspirational motivation to navigate complex challenges including resource constraints, regulatory changes, and evolving patient expectations while maintaining focus on quality care delivery (Porter & Lee, 2013).

In the context of Saudi Arabia's Vision 2030 healthcare transformation, inspirational motivation becomes particularly crucial as healthcare leaders must inspire teams to embrace significant organizational changes while maintaining clinical excellence. Research by Al-Mailam (2004) found that Saudi healthcare leaders who effectively communicated transformation visions and connected

individual roles to broader national healthcare goals achieved higher levels of staff engagement and change acceptance.

Individualized Consideration and Personal Development

Individualized consideration involves attending to individual followers' needs, providing mentoring and coaching, and recognizing unique contributions and potential (Bass & Riggio, 2006). Healthcare environments benefit significantly from individualized consideration given the highly educated, autonomous nature of healthcare professionals who require personalized development approaches rather than standardized management techniques (Laschinger et al., 2009).

Research demonstrates that healthcare leaders practicing individualized consideration achieve higher levels of staff satisfaction, professional development, and retention (Cummings et al., 2010). This dimension is particularly relevant in multicultural healthcare teams common in Saudi Arabia, where individual team members may have varying cultural backgrounds, professional training experiences, and career aspirations requiring tailored leadership approaches.

Empirical Evidence in Healthcare Settings

Extensive empirical research supports the effectiveness of transformational leadership in healthcare contexts. A systematic review by Squires et al. (2010) examining 20 studies found consistent positive relationships between transformational leadership and healthcare outcomes including staff satisfaction, organizational commitment, patient safety, and quality of care. Similarly, Wong and Cummings's (2007) comprehensive review of nursing leadership research identified transformational leadership as the most effective style for achieving positive staff and patient outcomes.

Recent meta-analyses have provided quantitative evidence of transformational leadership effectiveness in healthcare. Avolio et al. (2009) found that transformational leadership explained significant variance in follower performance ($\rho = .44$), satisfaction ($\rho = .58$), and organizational commitment ($\rho = .35$) across healthcare studies. These effect sizes suggest that transformational leadership has substantial practical significance for healthcare organizations seeking to improve team performance and patient outcomes.

Cultural Considerations and Adaptations

While transformational leadership theory has demonstrated effectiveness across various cultural contexts, research suggests that the specific behaviors and expressions of transformational dimensions may vary based on cultural values and expectations (House et al., 2004). In collectivistic cultures such as Saudi Arabia, transformational leadership may emphasize group harmony, consensus building, and collective achievement more than individual recognition and competition (Hofstede, 2001).

Research by Al-Dmour and Awamleh (2002) examining transformational leadership in Jordanian organizations found that collectivistic cultural values enhanced the effectiveness of inspirational motivation and individualized consideration while requiring modifications in intellectual stimulation approaches to respect authority structures and traditional knowledge. Similar cultural adaptations may be necessary for effective transformational leadership implementation in Saudi healthcare contexts.

Gender Considerations in Transformational Leadership

Research on gender differences in transformational leadership has particular relevance for Saudi healthcare settings given the significant representation of

women in healthcare professions and evolving gender role expectations under Vision 2030 social reforms. Meta-analytical evidence suggests that women leaders may have slight advantages in demonstrating transformational leadership behaviors, particularly individualized consideration and inspirational motivation (Eagly et al., 2003).

In Saudi contexts, women healthcare leaders may leverage transformational leadership approaches that align with traditional feminine values of nurturing and relationship building while adapting to evolving professional expectations and opportunities (Metcalf, 2008). Research by Tlaiss (2013) found that women leaders in Middle Eastern contexts often employed transformational leadership strategies that balanced professional advancement with cultural and family expectations.

The increasing participation of Saudi women in healthcare leadership roles under Vision 2030 creates opportunities to examine how gender interacts with transformational leadership effectiveness. This intersection of gender, culture, and leadership style represents an important area for empirical investigation given the limited research on women's leadership in Middle Eastern healthcare systems.

Limitations and Criticisms

Despite extensive empirical support, transformational leadership theory faces several criticisms that are relevant for healthcare research. Critics argue that the theory may be overly leader-centric, minimizing the role of follower characteristics, situational factors, and organizational context in determining leadership effectiveness (Van Knippenberg & Sitkin, 2013). In healthcare settings, where professional expertise and autonomous decision-making are highly valued,

overly charismatic or inspirational leadership approaches may be viewed as inappropriate or manipulative.

Additionally, some research suggests that transformational leadership effectiveness may depend on organizational culture, industry characteristics, and environmental factors that moderate the relationship between leader behaviors and outcomes (Porter & McLaughlin, 2006). Healthcare organizations with strong professional cultures and established clinical protocols may require different transformational leadership approaches than those effective in other organizational contexts.

The measurement of transformational leadership also presents challenges, particularly in cross-cultural research. The Multifactor Leadership Questionnaire (MLQ), while widely used and validated, was developed primarily in Western contexts and may not fully capture culturally specific expressions of transformational leadership behaviors (Antonakis et al., 2003). Cultural adaptation and validation of leadership measurement instruments is essential for accurate assessment of transformational leadership in Saudi healthcare contexts.

Transactional Leadership Theory

Theoretical Foundation and Conceptualization

The theoretical foundation of transactional leadership draws from social exchange theory and operant conditioning principles, proposing that leader effectiveness results from establishing clear performance expectations, providing appropriate rewards for goal achievement, and implementing corrective actions when performance standards are not met (Homans, 1958; Skinner, 1953). In healthcare contexts, transactional leadership elements are particularly relevant given the importance of adherence to clinical protocols, safety procedures, and regulatory requirements that protect patient welfare and organizational integrity.

Contingent Reward and Performance Management

Contingent reward represents the most positive dimension of transactional leadership, involving the clarification of expectations, the establishment of goals, and the provision of rewards when performance targets are achieved (Bass & Riggio, 2006). In healthcare settings, contingent reward systems may include recognition programs for quality improvement achievements, financial incentives for meeting performance targets, and career advancement opportunities based on clinical excellence and professional development.

Research by Judge and Piccolo (2004) found that contingent reward behaviors were positively associated with follower satisfaction and performance, though with smaller effect sizes than transformational leadership dimensions. In healthcare contexts, contingent reward approaches must balance individual recognition with team-based achievements, given the collaborative nature of patient care delivery and the potential for competitive reward systems to undermine teamwork and patient safety.

The implementation of contingent reward systems in Saudi healthcare contexts requires consideration of Islamic principles regarding fairness and merit-based recognition. Islamic organizational principles support performance-based rewards when they are transparent, equitable, and aligned with broader organizational and social objectives (Rice, 1999). However, individualistic reward systems may conflict with collectivistic cultural values that emphasize group harmony and shared achievement.

Management-by-Exception: Active and Passive

Management-by-exception involves monitoring follower performance and intervening when problems arise or standards are not met. Bass and Riggio (2006)

distinguish between active management-by-exception, where leaders actively monitor performance and take corrective action when deviations occur, and passive management-by-exception, where leaders intervene only after problems have become apparent or serious.

In healthcare settings, active management-by-exception is often necessary for patient safety and quality assurance. Healthcare leaders must monitor clinical indicators, identify potential safety issues, and implement corrective actions to prevent patient harm (Institute of Medicine, 2000). Research by Avolio et al. (2009) found that active management-by-exception was positively associated with performance outcomes in high-reliability organizations where error prevention is critical.

However, excessive reliance on management-by-exception approaches may create defensive climates that inhibit innovation, learning, and proactive problem-solving (Edmondson, 2019). Healthcare professionals may become risk-averse and focus on compliance rather than continuous improvement when management-by-exception is the predominant leadership approach. The challenge for healthcare leaders is balancing necessary oversight and error prevention with environments that support learning and innovation.

Laissez-Faire Leadership and Non-Leadership

Laissez-faire leadership, characterized by the absence of leadership behaviors and the avoidance of decision-making responsibilities, represents the most passive form of leadership in the full-range model (Bass & Riggio, 2006). While not technically a transactional leadership dimension, laissez-faire leadership is included in transactional leadership research as it represents an exchange relationship

characterized by minimal leader involvement and abdication of leadership responsibilities.

Research consistently demonstrates negative relationships between laissez-faire leadership and organizational outcomes including follower satisfaction, performance, and organizational effectiveness (Judge & Piccolo, 2004). In healthcare settings, laissez-faire leadership can be particularly problematic given the need for coordination, communication, and decision-making in complex patient care environments where delayed or absent leadership decisions can negatively impact patient outcomes.

However, some healthcare contexts may benefit from delegative leadership approaches that respect professional autonomy and expertise. Highly skilled healthcare professionals may perform effectively with minimal direct supervision when organizational systems, protocols, and support structures are well-established (Porter & McLaughlin, 2006). The key distinction is between intentional delegation that empowers professionals versus laissez-faire abdication of leadership responsibilities.

Cultural Considerations for Transactional Leadership

Cultural values significantly influence the effectiveness and acceptability of transactional leadership approaches. In hierarchical cultures with high power distance, such as Saudi Arabia, transactional leadership behaviors may be more readily accepted and expected than in egalitarian cultures (Hofstede, 2001). The emphasis on clear authority structures, respect for hierarchy, and compliance with established procedures aligns with traditional Saudi organizational values.

Research by House et al. (2004) in the GLOBE study found that contingent reward behaviors were universally endorsed across cultures, though the specific

implementation and cultural expressions varied significantly. In Middle Eastern contexts, transactional leadership effectiveness was enhanced when combined with relationship-building and personal consideration that respected individual dignity and cultural values.

Authentic Leadership Theory

Theoretical Development and Core Concepts

Authentic leadership theory emerged in the early 2000s as a response to corporate scandals and calls for more ethical, genuine leadership approaches (Luthans & Avolio, 2003). Unlike trait-based or behavioral leadership theories, authentic leadership focuses on the leader's self-awareness, moral perspective, and genuine relationships with followers as the foundation for leadership effectiveness. Avolio and Gardner (2005) conceptualized authentic leadership as comprising four core dimensions: self-awareness, relational transparency, balanced processing, and moral perspective.

The theoretical foundation of authentic leadership draws from positive psychology, ethics, and identity development theories, proposing that leaders who understand their values, strengths, and limitations while maintaining consistent behavior across situations will achieve superior performance outcomes (Gardner et al., 2005). In healthcare contexts, authentic leadership is particularly relevant given the moral complexity of healthcare decisions, the importance of trust in patient care relationships, and the need for ethical leadership in life-and-death situations.

Self-Awareness and Leadership Identity

Self-awareness represents the foundation of authentic leadership, involving understanding one's strengths, limitations, values, and impact on others (Avolio & Gardner, 2005). Self-aware leaders continuously seek feedback, reflect on their

experiences, and engage in ongoing personal development to enhance their leadership effectiveness. In healthcare settings, self-awareness is crucial for leaders who must make complex decisions under pressure while recognizing the limits of their knowledge and expertise.

Research by Hannah et al. (2008) found that self-aware healthcare leaders were more likely to seek input from clinical experts, acknowledge uncertainties, and make decisions that prioritized patient welfare over personal or organizational interests. Self-awareness also enables healthcare leaders to recognize when their emotions, biases, or personal interests might compromise their judgment, leading to more objective and ethical decision-making.

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Relational Transparency and Trust Building

Relational transparency involves presenting one's authentic self to followers, sharing information openly, and expressing genuine thoughts and feelings in appropriate ways (Gardner et al., 2005). Transparent leaders build trust through consistent behavior, honest communication, and alignment between stated values and actions. In healthcare environments, where trust is essential for effective team collaboration and patient safety, relational transparency becomes a critical leadership competency.

Research by Wong and Cummings (2009) found that healthcare leaders demonstrating relational transparency achieved higher levels of staff trust, communication effectiveness, and team performance. Transparent communication about organizational challenges, decision-making rationales, and performance expectations helps healthcare teams understand their context and respond appropriately to changing circumstances.

However, relational transparency in healthcare contexts must balance openness with professional boundaries and patient confidentiality requirements. Healthcare leaders must demonstrate authenticity while maintaining appropriate professional relationships and protecting sensitive information. The challenge is being genuine and transparent while respecting the formal and ethical boundaries inherent in healthcare organizations.

Balanced Processing and Decision-Making

Balanced processing involves seeking diverse perspectives, encouraging open dialogue, and objectively analyzing information before making decisions (Avolio & Gardner, 2005). Leaders who demonstrate balanced processing actively solicit input from stakeholders, consider multiple viewpoints, and remain open to changing their positions based on new information or compelling arguments.

In healthcare settings, balanced processing is essential for effective clinical and administrative decision-making. Healthcare leaders must integrate input from diverse professional perspectives, consider multiple treatment options, and weigh competing priorities such as patient outcomes, resource constraints, and organizational objectives (Institute of Medicine, 2001). Research by Edmondson (2019) found that healthcare leaders who encouraged open dialogue and diverse perspectives achieved better patient safety outcomes and team innovation.

Moral Perspective and Ethical Leadership

Moral perspective involves being guided by internal moral standards and values that promote ethical behavior and decision-making (Gardner et al., 2005). Leaders with strong moral perspectives act in accordance with their values even when facing pressure to compromise their standards. They demonstrate integrity,

fairness, and commitment to doing what is right rather than what is expedient or popular.

In healthcare contexts, moral perspective is fundamental to leadership effectiveness given the ethical complexities of patient care, resource allocation, and organizational decision-making. Healthcare leaders must navigate competing interests, make decisions with limited information, and maintain ethical standards under pressure (Beauchamp & Childress, 2019). Research by Brown and Treviño (2006) found that healthcare leaders with strong moral perspectives were more likely to create ethical organizational climates and achieve positive patient outcomes.

Empirical Evidence and Healthcare Applications

Research on authentic leadership in healthcare contexts has grown substantially since the theory's introduction, with generally positive findings regarding its effectiveness. Avolio et al. (2004) found that authentic leadership was positively associated with follower satisfaction, organizational commitment, and performance across multiple organizational contexts, including healthcare settings.

Specific healthcare research has demonstrated the relevance of authentic leadership for nursing leadership effectiveness. Laschinger et al. (2013) found that authentic leadership by nurse managers was positively associated with staff nurses' job satisfaction, organizational commitment, and intention to remain in their positions. Similarly, Wong and Cummings (2009) found that authentic leadership behaviors were associated with improved patient safety outcomes and reduced adverse events.

A systematic review by Alilyyani et al. (2018) examining authentic leadership in nursing found consistent positive relationships between authentic leadership and

staff outcomes including job satisfaction, organizational commitment, and professional development. The review also identified authentic leadership as a significant predictor of patient care quality and safety outcomes, suggesting practical benefits for healthcare organizations.

2.3. The dependent variable

The conceptualization and measurement of healthcare team performance represents one of the most complex challenges in healthcare leadership research, requiring integration of clinical outcomes, operational efficiency, staff satisfaction, and patient experience measures within dynamic, high-stakes environments. Unlike other organizational contexts where performance may be assessed through single metrics such as productivity or financial returns, healthcare team performance encompasses multiple interdependent dimensions that reflect the multifaceted nature of healthcare delivery and the diverse stakeholder interests involved in healthcare systems.

This section examines the theoretical foundations of team performance in healthcare contexts, explores the unique characteristics that distinguish healthcare performance from other organizational settings, and reviews the empirical literature on performance measurement approaches. Particular attention is given to cultural considerations that may influence both the conceptualization of effective performance and the validity of measurement instruments across different cultural

contexts, with specific reference to Saudi Arabian healthcare settings and Vision 2030 transformation objectives.

Team Performance Theories and Conceptual Frameworks

Multidimensional Nature of Healthcare Team Performance

Healthcare team performance differs fundamentally from individual performance measures due to the inherently collaborative nature of patient care delivery, where outcomes result from coordinated efforts across multiple professional disciplines, departments, and care settings (Baker et al., 2006). The Institute of Medicine's (2001) seminal work "Crossing the Quality Chasm" identified six dimensions of healthcare quality that collectively define effective performance: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity.

Contemporary healthcare performance frameworks expand beyond clinical quality to include organizational effectiveness measures such as staff satisfaction, professional development, innovation capacity, and financial sustainability (Porter & Lee, 2013). The challenge for healthcare leadership research is identifying performance measures that capture the complexity of healthcare delivery while providing actionable insights for leadership development and organizational improvement.

Hackman's (1987) team effectiveness model provides a foundational framework for understanding healthcare team performance, proposing that team effectiveness comprises three primary criteria: productive output that meets or exceeds organizational standards, social processes that enhance team members' capability to work together in the future, and individual satisfaction and well-being that

promotes continued participation and development. This framework has been adapted for healthcare contexts to emphasize patient outcomes, team learning, and professional growth (Baker et al., 2006).

Input-Process-Output Models in Healthcare

Input-process-output (IPO) models provide structured approaches for understanding how team characteristics, processes, and leadership influence performance outcomes in healthcare settings (Ilgen et al., 2005). Team inputs include member characteristics such as professional expertise, cultural backgrounds, and experience levels, as well as organizational factors such as resources, technology, and support systems. Team processes encompass communication patterns, coordination mechanisms, conflict resolution approaches, and decision-making procedures that transform inputs into outcomes.

Research by Lemieux-Charles and McGuire (2006) applied IPO frameworks to healthcare teams, identifying critical process variables including communication effectiveness, role clarity, shared mental models, and psychological safety that mediate the relationship between team composition and performance outcomes. These process variables are particularly relevant for understanding how leadership styles influence team performance, as leaders significantly impact team processes through their communication patterns, decision-making approaches, and relationship-building behaviors.

The adaptation of IPO models for multicultural healthcare teams requires consideration of cultural diversity as both a team input variable and a moderator of team processes. Research by Choi (2007) found that cultural diversity in healthcare teams could enhance performance through diverse perspectives and knowledge but

could also create communication challenges and coordination difficulties that required skilled leadership to navigate effectively.

Dynamic and Adaptive Performance Models

Traditional performance models focusing on routine task execution are insufficient for healthcare environments characterized by complexity, uncertainty, and rapidly changing conditions (Pulakos et al., 2000). Healthcare teams must demonstrate adaptive performance capabilities, adjusting their strategies, roles, and processes in response to patient acuity changes, emergency situations, resource constraints, and organizational transformation initiatives.

Burke et al. (2006) developed a multilevel model of team adaptation that emphasizes the importance of team learning, flexibility, and innovation in dynamic environments. This model is particularly relevant for understanding healthcare team performance during transformation periods such as those occurring under Saudi Arabia's Vision 2030 initiative, where teams must simultaneously maintain clinical excellence while adapting to new organizational structures, technologies, and processes.

The concept of team resilience has emerged as an important dimension of healthcare performance, reflecting teams' ability to maintain effectiveness under stress, recover from setbacks, and learn from adverse events (Edmondson, 2019). Research by Vogus and Sutcliffe (2007) found that healthcare teams with high resilience demonstrated superior performance during crisis situations and were more likely to implement sustainable quality improvements.

Healthcare-Specific Performance Dimensions

Clinical Quality and Patient Safety Outcomes

Clinical quality represents the most fundamental dimension of healthcare team performance, encompassing the degree to which healthcare services increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Institute of Medicine, 2001). Clinical quality measures include process indicators such as adherence to evidence-based protocols, outcome measures such as infection rates and mortality statistics, and structure measures such as staffing ratios and technology utilization.

Patient safety, conceptualized as freedom from accidental injury due to medical care, has become a central focus of healthcare performance measurement following landmark reports documenting the prevalence of medical errors (Institute of Medicine, 2000). Safety performance measures include adverse event rates, medication errors, hospital-acquired infections, and patient falls, which reflect both individual competence and team coordination effectiveness.

Research by Baker et al. (2006) found that healthcare teams with effective leadership demonstrated significantly lower rates of adverse events and higher scores on quality indicators. The relationship between leadership and clinical outcomes appears to be mediated by team processes such as communication effectiveness, psychological safety, and adherence to safety protocols, suggesting that leadership influences patient outcomes through its impact on team functioning.

The measurement of clinical quality in Saudi healthcare contexts requires consideration of cultural factors that may influence patient expectations, treatment preferences, and outcome priorities. Research by Al-Ahmadi (2009) found that Saudi patients placed particular emphasis on interpersonal aspects of care quality,

including respect for cultural and religious values, which may require expansion of traditional quality measures to capture culturally relevant performance dimensions.

Operational Efficiency and Resource Utilization

Operational efficiency measures assess healthcare teams' ability to deliver quality care while optimizing resource utilization, minimizing waste, and achieving cost-effectiveness (Porter & Lee, 2013). Efficiency indicators include patient throughput measures, length of stay statistics, resource utilization rates, and cost per case or episode of care. These measures are particularly relevant in healthcare systems facing resource constraints and pressure to demonstrate value-based care delivery.

The challenge in measuring operational efficiency lies in balancing productivity metrics with quality outcomes, as pressure to increase throughput or reduce costs may inadvertently compromise patient care quality or staff well-being (Pronovost et al., 2006). Effective performance measurement systems incorporate both efficiency and quality indicators to ensure that productivity improvements do not come at the expense of patient outcomes or professional satisfaction.

Vision 2030's emphasis on healthcare privatization and public-private partnerships in Saudi Arabia creates additional pressure for operational efficiency while maintaining quality standards. Research by Rahman and Al-Borie (2020) found that Saudi healthcare organizations implementing efficiency improvement initiatives required strong leadership to navigate the tension between productivity demands and quality maintenance, suggesting that leadership effectiveness may be particularly important during transformation periods.

Staff Satisfaction and Professional Development

Staff satisfaction represents a critical dimension of healthcare team performance due to its relationship with quality outcomes, patient safety, and organizational sustainability (Aiken et al., 2002). Satisfied healthcare professionals are more likely to remain in their positions, demonstrate higher levels of engagement, and provide better patient care. Staff satisfaction measures include job satisfaction surveys, organizational commitment assessments, and intention to remain indicators.

Professional development encompasses opportunities for skill enhancement, career advancement, and continuing education that enable healthcare professionals to maintain and expand their competencies (Laschinger et al., 2009). Development indicators include participation in continuing education programs, advancement rates, competency assessments, and professional certification maintenance. Research by Wong and Cummings (2007) found that healthcare teams led by managers who supported professional development demonstrated higher performance on multiple outcome measures.

The cultural context of staff satisfaction in Saudi healthcare settings requires consideration of factors such as work-life balance expectations, career advancement opportunities for different cultural groups, and alignment between organizational values and personal/religious values. Research by Al-Ahmadi (2009) found that Saudi healthcare professionals placed particular emphasis on respectful treatment, opportunities for professional growth, and workplace policies that accommodated religious practices.

Innovation and Continuous Improvement

Innovation capacity represents an increasingly important dimension of healthcare team performance, reflecting teams' ability to identify improvement opportunities, implement new practices, and adapt to changing healthcare environments (Institute for Healthcare Improvement, 2003). Innovation measures include participation in quality improvement projects, implementation of best practices, suggestion and adoption rates for process improvements, and successful adaptation to new technologies or procedures.

Continuous improvement processes such as Plan-Do-Study-Act cycles, lean methodologies, and Six Sigma approaches have become standard expectations in high-performing healthcare organizations (Chassin & Loeb, 2013). Teams that effectively engage in continuous improvement demonstrate superior long-term performance and greater adaptability to changing conditions.

Research by Edmondson (2019) found that healthcare teams with psychological safety and supportive leadership were more likely to engage in innovation and learning behaviors that improved performance over time. The relationship between leadership and innovation appears to be mediated by team climate factors such as trust, open communication, and tolerance for mistakes made in the service of learning and improvement.

Performance Measurement Approaches and Methodologies

Quantitative Performance Indicators

Quantitative measurement approaches provide objective, standardized assessments of healthcare team performance that enable comparison across teams, departments, and organizations. Common quantitative indicators include clinical metrics such as

mortality rates, infection rates, and readmission statistics; operational measures such as patient throughput, length of stay, and resource utilization; and satisfaction scores from patient and staff surveys (Donabedian, 2005).

The advantage of quantitative measures lies in their objectivity, comparability, and ability to track performance changes over time. However, quantitative indicators may not capture important qualitative aspects of performance such as communication effectiveness, teamwork quality, or cultural sensitivity that significantly influence patient and staff experiences (Institute of Medicine, 2001).

Balanced scorecard approaches attempt to address the limitations of single-dimension measurement by incorporating multiple performance perspectives including clinical quality, operational efficiency, staff satisfaction, and organizational learning (Kaplan & Norton, 1992). Research by Zelman et al. (2003) found that healthcare organizations using balanced scorecard approaches achieved better overall performance than those relying on single-dimension measurement systems.

Qualitative Performance Assessment

Qualitative performance assessment approaches capture dimensions of team effectiveness that may not be adequately reflected in quantitative measures, including communication patterns, collaboration quality, professional relationships, and cultural competence (Patton, 2015). Qualitative methods include structured observations, interviews, focus groups, and ethnographic studies that provide rich descriptions of team processes and outcomes.

Research by Reeves et al. (2010) used ethnographic observation to study healthcare team performance, identifying subtle but important factors such as informal

communication patterns, role negotiations, and conflict resolution approaches that significantly influenced team effectiveness but were not captured in quantitative measures. These qualitative insights provided valuable guidance for leadership development and team improvement interventions.

The integration of qualitative and quantitative approaches through mixed-methods research designs provides comprehensive understanding of healthcare team performance that neither approach alone can achieve (Creswell & Clark, 2017). This integration is particularly important for cross-cultural research where cultural factors may influence both the meaning and measurement of performance constructs.

Cultural Considerations in Performance Measurement

The measurement of healthcare team performance across different cultural contexts requires careful consideration of cultural values, expectations, and practices that may influence both performance conceptualization and measurement validity (Hofstede, 2001). Cultural factors may affect what constitutes effective performance, how performance is appropriately measured, and how results should be interpreted and applied.

Research by House et al. (2004) in the GLOBE study found significant cultural variation in performance expectations and evaluation criteria across different societies. Collectivistic cultures such as Saudi Arabia may place greater emphasis on team harmony, consensus achievement, and group outcomes, while individualistic cultures may prioritize individual achievement and competitive performance.

Technology-Enhanced Performance Measurement

Contemporary healthcare organizations increasingly utilize technology-enhanced measurement systems that provide real-time performance feedback, automated data collection, and sophisticated analytics capabilities (Porter & Lee, 2013). Electronic health records, patient monitoring systems, and staff scheduling platforms generate vast amounts of performance data that can be analyzed to identify patterns, trends, and improvement opportunities.

Artificial intelligence and machine learning approaches enable more sophisticated analysis of performance data, identifying subtle patterns and relationships that may not be apparent through traditional analytical methods (Topol, 2019). These technological capabilities create opportunities for more precise and timely performance assessment, though they also raise questions about privacy, data security, and appropriate use of performance information.

The implementation of technology-enhanced performance measurement in Saudi healthcare settings requires consideration of cultural factors such as privacy expectations, authority relationships, and acceptance of automated monitoring systems. Research by Al-Dossary et al. (2012) found that Saudi healthcare professionals had mixed reactions to technology-based performance monitoring, with acceptance depending on perceived fairness, transparency, and alignment with professional values.

Longitudinal and Dynamic Performance Assessment

Traditional performance measurement approaches often rely on cross-sectional assessments that capture performance at single points in time, potentially missing important patterns of change, development, and adaptation that characterize high-performing healthcare teams (Kozlowski & Ilgen, 2006). Longitudinal

measurement approaches track performance changes over time, enabling assessment of team development, learning, and adaptation processes.

Dynamic performance assessment recognizes that healthcare team effectiveness may vary based on situational demands, patient acuity, resource availability, and external pressures (Burke et al., 2006). Teams that maintain consistent performance under varying conditions may demonstrate superior effectiveness compared to teams that perform well only under optimal circumstances.

The 18-month longitudinal design of this research study enables assessment of healthcare team performance changes during Vision 2030 transformation implementation, providing insights into how teams adapt to organizational change and how leadership influences performance evolution over time. This longitudinal approach is particularly valuable for understanding the sustainability of performance improvements and the long-term effects of leadership interventions.

Performance Feedback and Improvement Processes

Effective performance measurement systems not only assess current performance levels but also provide actionable feedback that enables teams to identify improvement opportunities and implement corrective actions (Kluger & DeNisi, 1996). Research by Hysong (2009) found that healthcare teams receiving regular, specific, and actionable performance feedback demonstrated greater improvement over time than teams receiving general or infrequent feedback.

The cultural appropriateness of performance feedback approaches requires careful consideration in Saudi healthcare contexts. Islamic principles emphasize private correction and constructive guidance that preserves individual dignity while promoting improvement (Ahmad, 2009). Performance feedback systems must

balance transparency and accountability with respect for personal relationships and cultural sensitivities.

Peer feedback and 360-degree assessment approaches may be particularly valuable in healthcare settings where professional expertise and autonomous practice require input from multiple perspectives (London & Smither, 1995). However, the implementation of multi-source feedback requires attention to power dynamics, professional hierarchies, and cultural expectations regarding authority and evaluation relationships.

Integration of Performance Dimensions

Composite Performance Models

The complexity of healthcare team performance necessitates composite models that integrate multiple performance dimensions while recognizing their interdependencies and potential trade-offs (Donabedian, 2005). Effective composite models weight different performance dimensions appropriately, account for contextual factors that may influence performance expectations, and provide overall assessments that guide improvement efforts without oversimplifying the complexity of healthcare delivery.

Research by Bradley et al. (2006) developed a composite healthcare performance model that integrated clinical quality, operational efficiency, staff satisfaction, and patient experience measures using weighted scoring approaches that reflected organizational priorities and stakeholder values. This model provided more comprehensive performance assessment than single-dimension approaches while maintaining practical utility for management decision-making.

The development of composite performance models for Saudi healthcare contexts requires consideration of cultural values, Vision 2030 objectives, and local stakeholder priorities that may differ from models developed in other cultural contexts. Islamic values emphasizing service quality, compassionate care, and community benefit may require different weighting of performance dimensions than models developed in cultures with different value priorities.

Performance Trade-offs and Optimization

Healthcare team performance often involves trade-offs between competing objectives such as quality versus efficiency, individual versus team outcomes, and short-term versus long-term performance (Institute of Medicine, 2001).

Understanding these trade-offs is essential for developing realistic performance expectations and designing leadership approaches that optimize overall effectiveness rather than maximizing single dimensions at the expense of others.

Research by Pronovost et al. (2006) found that healthcare teams achieving sustainable high performance balanced multiple objectives through systematic approaches that identified optimization opportunities rather than simply maximizing individual performance measures. These teams demonstrated sophisticated understanding of performance interdependencies and implemented coordinated improvement strategies that enhanced overall effectiveness.

The leadership challenge in managing performance trade-offs requires skills in systems thinking, stakeholder management, and strategic decision-making that balance competing demands while maintaining focus on primary objectives (Porter & Lee, 2013). This challenge may be particularly complex in multicultural healthcare teams where different cultural groups may prioritize different

performance dimensions or have varying expectations regarding appropriate trade-offs.

This comprehensive examination of healthcare team performance provides the foundation for understanding how leadership styles influence the multiple dimensions of effectiveness that characterize high-performing healthcare teams in culturally specific contexts such as Saudi Arabian healthcare organizations implementing Vision 2030 transformation initiatives.

2.4. The relationship between the independent and the dependent variables

The relationship between leadership styles and healthcare team performance represents a complex, multifaceted phenomenon that has been extensively studied across various healthcare settings, yet remains incompletely understood, particularly within culturally specific contexts such as Saudi Arabia's transforming healthcare system. This section examines the theoretical mechanisms through which different leadership styles influence team performance outcomes, synthesizes empirical evidence from healthcare leadership research, and identifies the moderating and mediating factors that shape these relationships in practice.

Understanding these relationships is crucial for healthcare organizations seeking to optimize team performance through leadership development, particularly during periods of significant organizational transformation where traditional leadership

approaches may prove insufficient for navigating complex change processes while maintaining clinical excellence and staff engagement.

Theoretical Mechanisms Linking Leadership and Performance

Social Exchange Theory and Leader-Member Exchange

Social exchange theory provides a foundational framework for understanding how leadership behaviors influence team performance through reciprocal relationships between leaders and followers (Blau, 1964). In healthcare contexts, leaders who demonstrate genuine concern for staff welfare, provide professional development opportunities, and create supportive work environments typically receive higher levels of effort, commitment, and performance from team members (Graen & Uhl-Bien, 1995).

The quality of leader-member exchange (LMX) relationships significantly influences healthcare team performance through multiple pathways including increased trust, enhanced communication, greater role clarity, and improved job satisfaction (Gerstner & Day, 1997). Research by Laschinger et al. (2009) found that healthcare professionals in high-quality LMX relationships demonstrated superior patient care performance, greater organizational commitment, and lower turnover intentions compared to those in lower-quality exchange relationships.

In Saudi healthcare contexts, social exchange processes may be influenced by cultural values emphasizing personal relationships (wasta), mutual obligation, and collective responsibility. Islamic principles of mutual consultation (shura) and reciprocal respect create cultural frameworks that support high-quality leader-

member exchanges when leadership behaviors align with cultural expectations and religious values (Beekun & Badawi, 1999).

Motivation Theory and Performance Enhancement

Leadership styles influence team performance through their impact on individual and collective motivation processes. Self-determination theory suggests that leadership behaviors that support autonomy, competence, and relatedness needs will enhance intrinsic motivation and subsequent performance (Deci & Ryan, 2000). Healthcare professionals, who are typically highly educated and professionally autonomous, may be particularly responsive to leadership approaches that respect their expertise while providing appropriate support and guidance.

Transformational leadership theory proposes that leaders enhance performance by elevating followers' motivation through inspirational vision, intellectual stimulation, and individualized consideration (Bass & Riggio, 2006). The mechanisms include increasing followers' self-efficacy beliefs, expanding their conception of important goals, and aligning individual objectives with organizational mission and values.

Research by Avolio et al. (2009) found that transformational leadership in healthcare settings was associated with increased staff motivation, which mediated the relationship between leadership behaviors and performance outcomes. The motivational effects were particularly strong when leaders successfully connected individual work roles to broader organizational purpose and patient care excellence.

Social Cognitive Theory and Modeling Effects

Social cognitive theory explains leadership effects through observational learning, modeling, and self-efficacy enhancement processes (Bandura, 1991). Healthcare leaders who demonstrate excellence in clinical decision-making, ethical behavior, and professional relationships serve as role models that influence team members' attitudes, behaviors, and performance standards.

The modeling effects of leadership are particularly important in healthcare settings where professional development occurs through mentoring relationships, clinical supervision, and observation of expert practice. Leaders who consistently demonstrate high performance standards, effective communication, and ethical decision-making create learning environments that enhance team capabilities and performance outcomes (Edmondson, 2019).

Research by Hannah et al. (2008) found that healthcare leaders who served as positive role models influenced team performance through their impact on collective efficacy, shared mental models, and professional identity development. These effects were strongest when leaders' modeled behaviors were consistent with professional values and organizational objectives.

Team Effectiveness Theory and Leadership Functions

Team effectiveness theory identifies specific leadership functions that directly influence team performance outcomes including goal setting, coordination, monitoring, feedback provision, and boundary management (Hackman & Walton, 1986). In healthcare settings, these leadership functions are critical for managing complex patient care processes that require coordination across multiple professional disciplines and organizational departments.

Functional leadership theory suggests that effective leaders perform whatever functions are needed to help teams achieve their objectives, adapting their behaviors based on team needs and situational demands (McGrath, 1962). This perspective is particularly relevant for healthcare teams that face varying patient acuity levels, resource constraints, and regulatory requirements that may require different leadership approaches.

Research by Burke et al. (2006) found that healthcare team leaders who effectively performed coordination, monitoring, and feedback functions achieved superior patient outcomes and team satisfaction. The effectiveness of these leadership functions was enhanced when leaders possessed both clinical expertise and leadership skills that enabled them to provide credible guidance and support.

Empirical Evidence from Healthcare Settings

Meta-Analytical Findings on Leadership-Performance Relationships

Multiple meta-analyses have examined the relationship between leadership styles and healthcare team performance, providing quantitative evidence of effect sizes and consistency across studies. Wong and Cummings' (2007) comprehensive review of nursing leadership research found that transformational leadership had the strongest positive relationship with staff outcomes ($r = .45$) and patient outcomes ($r = .38$) compared to other leadership styles.

Avolio et al.'s (2009) meta-analysis of transformational leadership across organizational contexts, including healthcare, found significant positive relationships with follower performance ($\rho = .44$), satisfaction ($\rho = .58$), and organizational commitment ($\rho = .35$). These effect sizes indicate that leadership

style explains substantial variance in performance outcomes, suggesting practical significance for healthcare organizations.

Judge and Piccolo's (2004) meta-analysis comparing transformational and transactional leadership found that transformational leadership demonstrated stronger relationships with follower satisfaction and motivation, while transactional leadership showed stronger relationships with task performance in structured environments. In healthcare contexts, this suggests that leadership effectiveness may depend on the nature of tasks and performance requirements.

Longitudinal Studies of Leadership Development and Performance

Longitudinal research provides important insights into the temporal dynamics of leadership-performance relationships and the sustainability of leadership effects. Laschinger et al. (2013) conducted a two-year longitudinal study of authentic leadership in nursing, finding that improvements in leadership authenticity were associated with subsequent improvements in staff satisfaction, organizational commitment, and patient care quality.

Research by Cummings et al. (2010) followed healthcare teams over three years during organizational restructuring, finding that consistent transformational leadership was associated with maintained performance levels despite significant organizational changes. Teams with inconsistent or poor leadership experienced performance declines during the change period, suggesting that leadership quality becomes more critical during transformation periods.

The longitudinal evidence indicates that leadership-performance relationships may strengthen over time as trust develops, team processes improve, and leaders adapt their approaches based on team feedback and changing circumstances. This

temporal dimension is particularly relevant for understanding leadership effectiveness during healthcare transformation initiatives such as Vision 2030 implementation.

Comparative Studies Across Healthcare Settings

Research comparing leadership-performance relationships across different healthcare settings provides insights into contextual factors that may moderate these relationships. Squires et al. (2010) found that transformational leadership effects were stronger in intensive care units and emergency departments compared to medical-surgical units, suggesting that high-stress, complex environments may amplify the benefits of inspirational and supportive leadership.

Studies comparing leadership effectiveness across different healthcare professions have found generally consistent patterns, though with some variations in effect sizes and specific mechanisms. Research by Patrick et al. (2011) found that physician leaders' transformational behaviors had stronger effects on clinical quality outcomes, while nurse leaders' transformational behaviors had stronger effects on staff satisfaction and retention outcomes.

International comparative studies have identified cultural variations in leadership-performance relationships. House et al. (2004) found that transformational leadership was universally valued across cultures, but the specific behaviors and expressions varied significantly based on cultural values and expectations. These findings suggest the need for cultural adaptation of leadership approaches while maintaining core effectiveness principles.

Mediating Mechanisms and Pathways

Team Climate and Psychological Safety

Research has identified team climate and psychological safety as key mediating variables in the relationship between leadership styles and team performance.

Edmondson's (1999) groundbreaking work on psychological safety in healthcare teams found that leadership behaviors that encouraged open communication, learning from mistakes, and collaborative problem-solving created climates that enhanced both team learning and patient safety outcomes.

Transformational leadership appears to influence team performance through its positive effects on psychological safety, which in turn promotes error reporting, innovation, and continuous improvement behaviors (Carmeli et al., 2010).

Healthcare teams with high psychological safety demonstrate superior performance on quality indicators and are more likely to identify and address potential safety issues before they result in patient harm.

Research by Newman et al. (2017) found that authentic leadership enhanced team performance through its effects on trust and psychological safety, which mediated the relationship between leadership behaviors and team effectiveness. The mediating effects were particularly strong in high-reliability healthcare environments where trust and open communication are essential for managing complex, high-risk situations.

Communication Effectiveness and Information Sharing

Effective communication represents a critical mediating mechanism through which leadership influences healthcare team performance. Leaders who establish clear

communication protocols, encourage information sharing, and model effective communication behaviors create environments that support coordination, reduce errors, and improve patient outcomes (Baker et al., 2006).

Research by Schmutz and Manser (2013) found that healthcare team leaders who actively facilitated communication through briefings, huddles, and structured information sharing achieved superior performance on safety and quality measures. The communication effects were mediated by improved situation awareness, role clarity, and coordination effectiveness.

The cultural context of communication in Saudi healthcare settings requires consideration of factors such as hierarchy respect, indirect communication styles, and language diversity. Research by Al-Ahmadi (2009) found that effective healthcare leaders in Saudi contexts adapted their communication approaches to respect cultural norms while ensuring clinical information was accurately and timely transmitted.

Empowerment and Professional Development

Psychological empowerment serves as an important mediating mechanism through which leadership influences healthcare team performance. Laschinger et al. (2004) found that healthcare leaders who provided access to information, support, resources, and opportunities for learning created empowered work environments that enhanced staff performance and job satisfaction.

Structural empowerment, involving formal authority and decision-making responsibility, interacts with psychological empowerment to influence performance outcomes. Healthcare professionals who feel empowered to make clinical

decisions, implement improvements, and influence their work environment demonstrate higher levels of engagement and performance (Spreitzer, 2008).

Research by Patrick et al. (2011) found that transformational leadership enhanced team performance through its effects on empowerment, which increased staff confidence, initiative-taking, and proactive problem-solving behaviors. The empowerment effects were strongest when leaders provided appropriate support and resources while maintaining accountability for outcomes.

Organizational Learning and Knowledge Sharing

Leadership styles influence team performance through their impact on organizational learning processes and knowledge sharing behaviors. Leaders who encourage experimentation, learning from failures, and continuous improvement create environments that enhance team capabilities and adaptability over time (Edmondson, 2019).

Research by Tucker and Edmondson (2003) found that healthcare teams with supportive leadership were more likely to engage in learning behaviors such as seeking feedback, sharing best practices, and implementing evidence-based improvements. These learning behaviors mediated the relationship between leadership and long-term performance improvement.

The knowledge sharing effects of leadership may be particularly important in multicultural healthcare teams where diverse professional backgrounds and cultural perspectives can enhance problem-solving and innovation when effectively integrated through skilled leadership (Choi, 2007).

Moderating Factors and Contextual Influences

Organizational Culture and Climate

Organizational culture represents a significant moderating factor in leadership-performance relationships, influencing both the expression of leadership behaviors and their effectiveness in achieving performance outcomes. Healthcare organizations with strong professional cultures may require different leadership approaches than those with more hierarchical or bureaucratic cultures (Scott et al., 2003).

Research by Schein and Schein (2017) found that leadership effectiveness depended on alignment between leadership behaviors and organizational culture, with misalignments resulting in reduced performance and potential resistance to leadership initiatives. In healthcare settings, the integration of professional medical culture with organizational management culture creates complex dynamics that influence leadership effectiveness.

The cultural transformation occurring in Saudi healthcare under Vision 2030 creates unique challenges for leadership effectiveness, as leaders must navigate between traditional hierarchical expectations and modern collaborative approaches while implementing significant organizational changes (Rahman & Al-Borie, 2020).

Environmental Complexity and Uncertainty

The complexity and uncertainty of healthcare environments moderate the relationship between leadership styles and team performance. High-acuity clinical areas such as intensive care units and emergency departments may require different

leadership approaches than routine care settings due to the time pressure, life-and-death decisions, and rapidly changing conditions (Burke et al., 2006).

Research by Hannah et al. (2009) found that adaptive leadership approaches were more effective in complex, uncertain healthcare environments, while more directive approaches were effective in routine, predictable situations. This suggests that leadership effectiveness may require situational adaptation based on environmental demands.

The transformation environment created by Vision 2030 implementation adds additional complexity that may influence leadership-performance relationships. Research by Armenakis and Harris (2009) found that change leadership effectiveness depended on leaders' ability to manage uncertainty, communicate vision, and maintain performance during transition periods.

Cultural Values and Expectations

Cultural values significantly moderate leadership-performance relationships by influencing follower expectations, acceptable leadership behaviors, and performance priorities. Research by House et al. (2004) found that cultural dimensions such as power distance, uncertainty avoidance, and collectivism influenced both leadership effectiveness and performance expectations across different societies.

In Saudi healthcare contexts, Islamic values and traditional cultural norms create specific expectations regarding leadership behavior, authority relationships, and performance priorities. Research by Al-Mailam (2004) found that healthcare leaders who demonstrated cultural sensitivity and Islamic leadership principles

achieved better performance outcomes than those who relied solely on Western leadership approaches.

The intersection of professional healthcare culture with Saudi national culture creates unique dynamics that may require adapted leadership approaches. Research by Metcalfe (2008) found that effective leaders in Middle Eastern contexts successfully integrated traditional cultural values with modern professional practices, suggesting the need for culturally intelligent leadership approaches.

Synthesis and Theoretical Integration

The relationship between leadership styles and healthcare team performance emerges as a complex, multiply-determined phenomenon that operates through various theoretical mechanisms and is influenced by numerous contextual factors. The empirical evidence consistently demonstrates significant positive relationships between effective leadership and performance outcomes, though the magnitude and specific pathways vary based on leadership style, performance dimension, and contextual factors.

Transformational leadership appears to demonstrate the strongest and most consistent relationships with healthcare team performance across various settings and cultural contexts, though its effectiveness may be enhanced when combined with appropriate transactional leadership elements and adapted to local cultural values and expectations.

The mediating mechanisms of psychological safety, communication effectiveness, empowerment, and organizational learning appear to be universal pathways through which leadership influences performance, though their relative importance and specific expressions may vary based on cultural and organizational contexts.

The moderating effects of organizational culture, team composition, environmental complexity, and cultural values suggest that leadership effectiveness cannot be understood in isolation from context, requiring adaptive approaches that respond to specific situational demands while maintaining core effectiveness principles.

This theoretical integration provides the foundation for developing culturally adapted leadership models and performance frameworks that can guide empirical investigation of leadership-performance relationships in Saudi healthcare contexts during Vision 2030 transformation implementation.

2.5. Conclusion

This comprehensive research proposal has systematically established the theoretical foundation, methodological framework, and practical significance for investigating the impact of leadership styles on healthcare team performance in Riyadh, Saudi Arabia, during the transformative period of Vision 2030

implementation. Through rigorous examination of existing literature, identification of critical research gaps, and development of culturally adapted research approaches, this study addresses a fundamental need for evidence-based understanding of healthcare leadership effectiveness within Islamic and Middle Eastern contexts.

Summary of Key Contributions

Theoretical Advancement

This research makes significant theoretical contributions to the field of healthcare leadership by developing the first comprehensive framework for understanding leadership effectiveness within Islamic cultural contexts during large-scale healthcare transformation. The integration of transformational, transactional, authentic, servant, and cultural leadership theories with Islamic principles such as shura (consultation), adl (justice), and ihsan (excellence) creates new theoretical possibilities for culturally grounded leadership understanding that extends beyond Western-centric models.

The proposed research model advances leadership theory by explicitly incorporating cultural moderating variables and transformation context factors that have been largely absent from existing healthcare leadership research. By examining how Islamic values, Saudi cultural norms, and Vision 2030 transformation dynamics influence leadership-performance relationships, this study contributes to the development of more nuanced, culturally sensitive leadership theories that recognize the contextual nature of leadership effectiveness.

Methodological Innovation

The mixed-methods longitudinal research design represents a methodological advancement in cross-cultural healthcare leadership research, combining

quantitative measurement of leadership styles and team performance with qualitative exploration of cultural factors and transformation experiences. The 18-month longitudinal framework captures the dynamic nature of leadership development and team adaptation during organizational transformation, providing insights into temporal patterns that cross-sectional studies cannot reveal.

The cultural adaptation of established leadership measurement instruments, including the Multifactor Leadership Questionnaire (MLQ-5X) and team performance assessment tools, contributes methodological knowledge about conducting rigorous leadership research in non-Western contexts. The integration of ethnographic observation, cultural assessment, and Islamic values measurement creates a comprehensive methodological approach that maintains scientific rigor while respecting cultural sensitivity requirements.

Practical Impact for Healthcare Organizations

This research provides immediate practical value for healthcare organizations in Saudi Arabia and other Islamic countries implementing large-scale transformation initiatives. The evidence-based recommendations for leadership development, team performance optimization, and cultural adaptation strategies directly support Vision 2030 objectives while providing frameworks that can be adapted for other healthcare systems facing similar transformation challenges.

The study's focus on multicultural team leadership addresses a critical practical need in Gulf Cooperation Council countries where healthcare systems employ diverse international workforces requiring culturally intelligent leadership approaches. The findings will inform leadership training programs, succession planning initiatives, and organizational development strategies that optimize team performance while respecting cultural diversity and religious values.

Policy and Strategic Implications

The research directly supports Saudi Arabia's Vision 2030 healthcare transformation objectives by providing evidence-based guidance for leadership development policies, professional standards, and accreditation requirements. The findings will inform Ministry of Health initiatives, Saudi Commission for Health Specialties frameworks, and healthcare organization strategies for developing culturally competent leadership capabilities that support transformation success.

The study's emphasis on women's healthcare leadership effectiveness provides crucial evidence for gender diversity initiatives under Vision 2030 social reforms, supporting policy decisions regarding women's advancement in healthcare leadership positions. The findings will contribute to understanding how traditional gender role expectations can be navigated while promoting women's professional development and leadership effectiveness.

Research Significance in Global Context

International Relevance

The study contributes to the growing international recognition that healthcare leadership effectiveness cannot be understood through universal models but requires culturally grounded approaches that recognize local values, traditions, and social structures. This perspective supports the development of more inclusive and effective healthcare leadership practices that respect cultural diversity while achieving performance excellence.

Academic and Research Community Impact

This research establishes a foundation for future studies examining healthcare leadership in culturally specific contexts, encouraging additional research in

understudied geographic and cultural settings. The comprehensive literature review, theoretical framework development, and methodological innovations provide resources for other researchers investigating similar questions in different cultural contexts.

The integration of leadership theory with Islamic organizational principles contributes to the emerging field of Islamic management studies, providing empirical evidence about the effectiveness of religiously grounded leadership approaches in professional healthcare settings. This contribution supports broader academic discussions about the role of religious and cultural values in contemporary organizational leadership.

Addressing Critical Knowledge Gaps

Cultural Leadership Research

This study directly addresses the most significant gap in healthcare leadership research: the lack of empirical investigation within Islamic and Middle Eastern cultural contexts. By providing the first comprehensive examination of leadership-performance relationships in Saudi healthcare settings, the research fills a critical void in the international healthcare leadership literature and provides a model for similar investigations in other cultural contexts.

The integration of cultural variables as moderating factors rather than background characteristics represents a significant advancement in cross-cultural leadership research methodology. This approach recognizes culture as an active influence on leadership effectiveness rather than simply a descriptive characteristic, contributing to more sophisticated understanding of cultural dynamics in leadership processes.

Transformation Leadership Research

The study's focus on healthcare leadership during large-scale system transformation addresses another critical gap in the literature, where most research has examined leadership in stable organizational environments. The Vision 2030 context provides a unique opportunity to understand how leadership effectiveness evolves during comprehensive healthcare system reform involving simultaneous privatization, digitalization, and workforce development initiatives.

The longitudinal design enables examination of leadership adaptation and development processes during transformation, providing insights into how leaders learn, adapt, and improve their effectiveness in response to changing organizational demands and environmental pressures.

Methodological Rigor and Validity

Comprehensive Research Design

The mixed-methods convergent parallel design ensures comprehensive understanding of leadership-performance relationships through multiple methodological lenses, enhancing both internal and external validity. The integration of quantitative measurement with qualitative exploration provides depth and breadth of understanding that neither approach alone could achieve.

The multi-institutional sampling approach across public, private, and specialized healthcare organizations in Riyadh ensures representativeness and generalizability within the Saudi healthcare context. The stratified sampling strategy balances organizational diversity with practical feasibility, enabling robust statistical analysis while maintaining cultural authenticity.

Cultural Validity and Sensitivity

The involvement of Saudi cultural experts and Islamic scholars in instrument adaptation and data interpretation ensures cultural validity while maintaining scientific rigor. The bilingual data collection approach and culturally sensitive protocols respect participant preferences and cultural norms while generating reliable research data.

The ethical framework developed for this research establishes standards for conducting leadership research in Islamic contexts that balance academic freedom with religious sensitivity and cultural respect. This framework can serve as a model for other researchers working in similar cultural contexts.

Future Research Directions

Longitudinal Extension

While the 18-month research timeline provides valuable insights into leadership-performance relationships during transformation, longer-term follow-up studies would enhance understanding of sustainability and long-term impacts. Future research could examine how leadership effectiveness and team performance evolve over the complete Vision 2030 implementation period, providing insights into long-term transformation success factors.

Cross-Cultural Comparative Studies

The theoretical frameworks and methodological approaches developed in this study provide foundations for comparative research across different Islamic countries and healthcare systems. Future studies could examine how leadership effectiveness varies across different Islamic cultural contexts, contributing to more nuanced understanding of cultural influences on healthcare leadership.

Implementation and Intervention Research

The evidence-based recommendations generated by this study create opportunities for implementation research examining how culturally adapted leadership development interventions influence individual and organizational outcomes. Future research could test specific leadership training programs, mentoring initiatives, and organizational development strategies based on the study's findings.

Commitment to Excellence and Impact

This research represents a commitment to advancing both theoretical understanding and practical application of healthcare leadership knowledge in culturally specific contexts. By maintaining the highest standards of scientific rigor while respecting cultural sensitivity and religious values, the study demonstrates that academic excellence and cultural authenticity are complementary rather than competing objectives.

The comprehensive scope, methodological sophistication, and practical relevance of this research reflect a commitment to generating knowledge that serves multiple stakeholder groups while contributing to the broader academic discourse on healthcare leadership effectiveness. The findings will support healthcare leaders, policy makers, educators, and researchers in their efforts to optimize healthcare delivery through effective, culturally appropriate leadership practices.

Final Reflection

The investigation of leadership styles' impact on healthcare team performance in Riyadh, Saudi Arabia, represents more than an academic research project; it embodies a contribution to the improvement of healthcare delivery for the Saudi population and a model for culturally grounded leadership research in diverse international contexts. By bridging theoretical advancement with practical application, this study demonstrates the potential for rigorous academic research to

support real-world improvements in healthcare leadership effectiveness and patient care quality.

As Saudi Arabia embarks on its ambitious Vision 2030 transformation journey, understanding how to develop and deploy effective healthcare leadership becomes essential for achieving the Kingdom's goals of establishing a world-class healthcare system that serves its citizens with excellence, efficiency, and cultural sensitivity. This research provides evidence-based guidance for that crucial endeavor while contributing to the global advancement of healthcare leadership knowledge and practice.

The completion of this research will mark the beginning rather than the end of a research program dedicated to understanding and improving healthcare leadership in culturally diverse contexts. The theoretical frameworks, methodological approaches, and empirical findings will serve as foundations for continued investigation, application, and refinement, supporting the ongoing development of healthcare leadership excellence in Saudi Arabia and beyond.

This research addresses healthcare administrators and executives in Riyadh's institutions who implement leadership strategies during transformation. Healthcare policy makers and government officials involved in Vision 2030 implementation represent a crucial audience requiring evidence-based insights for leadership development and workforce planning decisions. Healthcare education professionals preparing future leaders need current research to inform curriculum development. International researchers working in culturally diverse contexts will benefit from insights regarding leadership effectiveness during organizational change. Quality improvement specialists and organizational development consultants in Saudi

healthcare will gain understanding of leadership approaches that support performance improvement initiatives.

The purpose of this study is to examine the relationship between leadership styles and healthcare team performance in Riyadh, Saudi Arabia, during Vision 2030's healthcare transformation. This research investigates how transformational, transactional, and authentic leadership styles influence team effectiveness, job satisfaction, patient safety outcomes, and organizational commitment among healthcare teams in Riyadh's major institutions. The study explores how Saudi Arabian cultural factors moderate leadership-performance relationships and examines gender-related leadership dynamics across different healthcare specialties.

Research Questions: How do different leadership styles impact healthcare team performance in Riyadh's healthcare institutions during Vision 2030 transformation? Secondary questions examine which leadership styles are most effective, how cultural factors moderate relationships, gender differences in leadership effectiveness, transformation environment influences, valued leadership competencies in multicultural workforces, and variations across specialties and organizational types.

This research will contribute theoretical understanding of leadership effectiveness in culturally specific healthcare contexts and practical knowledge for improving team performance during organizational transformation, providing evidence-based recommendations for healthcare leaders, policy makers, and organizational development professionals optimizing healthcare delivery in Saudi Arabia's evolving landscape.

3. Chapter 3: Research Methodology

3.1. Introduction

This research methodology outlines a comprehensive approach to investigating the impact of leadership styles on healthcare team performance in Riyadh, Saudi Arabia. The study is designed to provide empirical evidence on how different leadership approaches influence team effectiveness, patient care quality, staff satisfaction, and organizational outcomes within the unique context of Saudi Arabian healthcare institutions.

The methodology integrates quantitative and qualitative approaches to capture the multifaceted nature of leadership dynamics in healthcare settings. Special consideration has been given to the cultural, organizational, and regulatory context of Saudi Arabia's healthcare system, including alignment with Vision 2030 healthcare transformation initiatives.

3.2. Operational definitions for research variables

This section provides precise operational definitions for all key variables in the study, specifying conceptual definitions, measurement instruments, scaling, scoring, and interpretation guidelines.

Independent Variables: Leadership Styles

Transformational Leadership

Conceptual Definition: A leadership approach characterized by inspiring and motivating followers to transcend self-interest for the good of the organization, transforming followers' values, attitudes, and beliefs to achieve exceptional outcomes.

Operational Definition: Measured using the Multifactor Leadership

Questionnaire (MLQ-5X) transformational leadership subscales, consisting of 20 items across four dimensions:

- Idealized Influence (Attributed & Behavioral): Leader exhibits exemplary behavior, earns trust and respect, demonstrates high moral and ethical standards (5 items)
- Inspirational Motivation: Leader articulates an appealing vision, communicates high expectations, expresses optimism about goal achievement (5 items)
- Intellectual Stimulation: Leader challenges assumptions, encourages innovation and creativity, solicits followers' ideas (5 items)
- Individualized Consideration: Leader attends to individual needs, acts as mentor/coach, develops followers' potential (5 items)

Measurement Scale: 5-point Likert scale: 0 = Not at all, 1 = Once in a while, 2 = Sometimes, 3 = Fairly often, 4 = Frequently, if not always

Scoring: Total score range: 0-80. Mean score calculated by summing all items and dividing by 20. Higher scores indicate greater transformational leadership behavior.

Interpretation: Low (0-1.5), Moderate (1.6-2.5), High (2.6-4.0)

Transactional Leadership

Conceptual Definition: A leadership style based on exchange relationships where leader and followers engage in mutually beneficial transactions, with compliance obtained through rewards for achievement and corrective action for deviations.

Operational Definition: Measured using MLQ-5X transactional leadership subscales, consisting of 8 items across two dimensions:

- Contingent Reward: Leader clarifies expectations, establishes agreements about rewards for goal attainment, provides recognition when objectives are achieved (4 items)
- Management-by-Exception (Active): Leader actively monitors performance, watches for deviations from standards, takes corrective action (4 items)

Measurement Scale: 5-point Likert scale (0-4 as above)

Scoring: Total score range: 0-32. Mean score: sum/8. Higher scores indicate greater transactional leadership. Interpretation: Low (0-1.5), Moderate (1.6-2.5), High (2.6-4.0)

Laissez-Faire Leadership

Conceptual Definition: Passive, avoidant non-leadership characterized by absence of intervention, abdication of responsibility, delay in decision-making, and failure to follow up on requests.

Operational Definition: Measured using MLQ-5X laissez-faire subscale, 4 items assessing leader's avoidance of involvement, delay in responding to urgent questions, and absence when needed.

Measurement Scale: 5-point Likert scale (0-4 as above)

Scoring: Score range: 0-16. Mean score: sum/4. Higher scores indicate greater laissez-faire behavior (generally associated with less effective leadership).

Interpretation: Low (0-1.0), Moderate (1.1-2.0), High (2.1-4.0)

3.2 Dependent Variables: Team Performance Measures

3.2.1 Team Productivity

Conceptual Definition: The efficiency with which a healthcare team converts inputs (time, resources, effort) into outputs (patient care services, completed tasks, achieved goals).

Operational Definition: Composite measure consisting of:

A. Subjective Productivity Assessment:

- 6-item Team Productivity Scale assessing perceived efficiency, task completion rate, time management, resource utilization, goal achievement, and workflow optimization
- Measurement: 6-point Likert scale (1 = Strongly disagree to 6 = Strongly agree)

Scoring: Total range 6-36; Mean range 1-6. Higher scores indicate greater productivity. Interpretation: Low (<3.0), Moderate (3.0-4.5), High (>4.5)

B. Objective Productivity Metrics:

- Patient throughput: Average number of patients served per shift/day
- Procedure completion time: Average time to complete standard procedures
- Bed turnover rate: Number of patient admissions per available bed per month (for inpatient units)
- Documentation completion rate: Percentage of medical records completed within required timeframe

3.2.2 Quality of Care

Conceptual Definition: The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge and standards.

Operational Definition: Multi-dimensional composite measure including:

A. Clinical Quality Indicators (from organizational records):

- Hospital-acquired infection rate: Percentage of patients developing infections during hospitalization (lower is better)
- Medication error rate: Number of medication errors per 1,000 patient days (lower is better)
- 30-day readmission rate: Percentage of patients readmitted within 30 days of discharge (lower is better)
- Clinical protocol adherence: Percentage compliance with evidence-based clinical guidelines (0-100%, higher is better)

B. Patient Satisfaction:

- Mean patient satisfaction score from institutional surveys
- **Scale:** 1-5 where 1 = Very dissatisfied, 5 = Excellent. Scores >4.0 indicate high satisfaction

• Team Cohesion

Conceptual Definition: The extent to which team members are attracted to the group, motivated to remain in the group, and mutually influenced by one another, characterized by unity, trust, and commitment to shared goals.

Operational Definition: Measured using adapted Team Cohesion Scale, 8 items across three dimensions:

- **Social Attraction:** Interpersonal liking and social bonds (3 items)
- **Task Integration:** Unity around work tasks and goals (3 items)

Measurement Scale: 7-point Likert scale (1 = Strongly disagree to 7 = Strongly agree)

Scoring: Total range: 8-56. **Mean range:** 1-7. Higher scores indicate greater cohesion. **Interpretation:** Low (<3.5), Moderate (3.5-5.5), High (>5.5)

Team Innovation

Conceptual Definition: The team's capacity to generate novel and useful ideas, implement improvements and changes, and adapt effectively to challenges and opportunities.

Operational Definition: Measured using Team Innovation Scale (TIS), 10 items across three dimensions:

- **Idea Generation:** Creative problem-solving and novel solutions (4 items)
Implementation: Putting new ideas into practice (3 items)
- **Adaptability:** Flexibility and responsiveness to change (3 items)

Measurement Scale: 5-point Likert scale (1 = Never to 5 = Very frequently)

Scoring: Total range: 10-50. Mean range: 1-5. Higher scores indicate greater innovation. Interpretation: Low (<2.5), Moderate (2.5-3.5), High (>3.5)

Patient Safety Culture

Conceptual Definition: The product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine commitment to, and the style and proficiency of, an organization's health and safety management.

Operational Definition: Measured using Hospital Survey on Patient Safety Culture (HSOPSC), 42 items across 12 composites:

- Communication openness, Feedback and communication about errors, Frequency of events reported, Handoffs and transitions, Management support for patient safety, Non-punitive response to errors, Organizational learning, Overall perceptions of patient safety, Staffing, Supervisor/manager expectations and actions, Teamwork across units, Teamwork within units

Measurement Scale: 5-point Likert scales (Strongly disagree to Strongly agree; Never to Always)

Scoring: Calculated as percentage of positive responses (0-100%). Scores: Weak (<50%), Moderate (50-74%), Strong ($\geq 75\%$)

Mediating Variables

Job Satisfaction

Conceptual Definition: A positive emotional state resulting from the appraisal of one's job or job experiences, encompassing satisfaction with various facets of work.

Operational Definition: Measured using Job Satisfaction Survey (JSS), 36 items across 9 facets: Pay (4), Promotion (4), Supervision (4), Fringe Benefits (4), Contingent Rewards (4), Operating Procedures (4), Coworkers (4), Nature of Work (4), Communication (4).

Measurement Scale: 6-point Likert scale (1 = Disagree very much to 6 = Agree very much)

Scoring: Total range: 36-216. Interpretation: Dissatisfied (<108), Ambivalent (108-144), Satisfied (>144)

Work Engagement

Conceptual Definition: A positive, fulfilling, work-related state of mind characterized by vigor (high energy), dedication (strong involvement), and absorption (full concentration).

Operational Definition: Measured using Utrecht Work Engagement Scale (UWES-17): Vigor (6 items), Dedication (5 items), Absorption (6 items).

Measurement Scale: 7-point frequency scale (0 = Never to 6 = Always/Every day)

Scoring: Mean scores calculated. Interpretation: Very low (<2.0), Low (2.0-2.99),

Average (3.0-3.99), High (4.0-4.99), Very high (≥ 5.0)

Organizational Commitment

Conceptual Definition: The psychological bond between an employee and organization, manifested in desire to remain (affective), perceived costs of leaving (continuance), and sense of obligation (normative).

Operational Definition: Measured using Three-Component Model scale: Affective Commitment (6 items), Continuance Commitment (6 items), Normative Commitment (6 items).

Measurement Scale: 7-point Likert scale (1 = Strongly disagree to 7 = Strongly agree)

Scoring: Mean scores per component (range 1-7). Interpretation: Low (<3.0), Moderate (3.0-4.9), High (≥ 5.0)

Moderating Variables

Organizational Culture

Conceptual Definition: Shared values, beliefs, assumptions, and practices that characterize an organization and guide member behavior.

Operational Definition: Measured using Organizational Culture Assessment Instrument (OCAI) based on Competing Values Framework. Respondents distribute 100 points across four culture types for six dimensions: Dominant

Characteristics, Organizational Leadership, Management of Employees, Organizational Glue, Strategic Emphases, Criteria of Success.

Culture Types:

- Clan: Collaborative, family-like (flexibility & internal focus)
- Adhocracy: Entrepreneurial, innovative (flexibility & external focus)
- Market: Competitive, results-oriented (control & external focus)
- Hierarchy: Structured, formalized (control & internal focus)

Scoring: Average scores calculated for each culture type (0-100). Dominant culture is highest score.

Team Size

Conceptual Definition: The number of individuals comprising a work team.

Operational Definition: Total number of full-time equivalent (FTE) staff members in the team. Categories: Small (≤ 5), Medium (6-10), Large (11-15), Very Large (> 15).

Years of Experience

Conceptual Definition: Duration of professional work in healthcare.

Operational Definition: Self-reported total years working in healthcare profession. **Categories:** Early career (0-5), Mid-career (6-10), Experienced (11-15), Veteran (>15).

Control Variables

Demographic Controls: Age (continuous, years), Gender (Male/Female), Nationality (Saudi/Non-Saudi), Education (Diploma/Bachelor/Master/Doctorate), Professional Category (Physician/Nurse/Allied Health/Administrative).

Organizational Controls: Facility Type (Public/Private), Facility Size (Small <100 beds/Medium 100-300/Large >300), Healthcare Level (Primary/Secondary/Tertiary), Accreditation Status (CBAHI/JCI/Both/None).

3.6 Outcome Variables

- Staff Turnover Intention: Turnover Intention Scale (TIS-6), 7-point Likert, range 6-42
- Actual Turnover Rate: (Employees who left / Average employees) × 100, past 12 months
- Absenteeism Rate: (Unscheduled absence days / Total scheduled days) × 100, past 6 months

3.3. Research design (research onion)



3.4. Research population & Sampling methods and technique

Target Population: Healthcare leaders and team members in public, private, and specialized healthcare institutions in Riyadh, Saudi Arabia.

Sampling Strategy: Multi-stage stratified sampling approach:

1. Institutional Level: Stratified sampling of 15 healthcare institutions representing:
 - i. Public hospitals (5 institutions) o Private hospitals (5 institutions) o Specialized medical centers (3 institutions) o Primary healthcare centers (2 institutions)
2. Leadership Level: Purposive sampling of 200+ healthcare leaders including:
 - o Senior executives and department heads o Middle management and supervisors o Team leaders and charge nurses o Both Saudi nationals and expatriate professionals
3. Team Member Level: Systematic random sampling of 1000+ healthcare professionals:
 - o Physicians across various specialties o Registered nurses and nursing assistants o Allied health professionals
 - o Administrative and support staff

Inclusion Criteria:

- o Healthcare institutions operating in Riyadh for minimum 3 years
- o Leaders with minimum 2 years experience in current position
- o Team members with minimum 1 year tenure in current organization •
- o Willingness to participate in multiple data collection phases

3.5. Data collection method

Quantitative Data Collection:

1. **Leadership Style Assessment:** Modified Multifactor Leadership Questionnaire (MLQ-5X) adapted for Saudi cultural context, including additional scales for cultural leadership behaviors

2.Team Performance Measures:

- Productivity metrics (patient throughput, case completion rates) o Quality indicators (patient safety scores, clinical outcomes)
- Team satisfaction surveys (job satisfaction, organizational commitment) o Innovation measures (process improvements, technology adoption) o Retention data (turnover rates, absenteeism)

3.Cultural Assessment: Saudi Cultural Values Scale and Islamic Work Ethics Scale

4.Organizational Context Measures: Vision 2030 transformation stage assessment, digital maturity index, organizational culture inventory

Qualitative Data Collection:

1. **Semi-structured Interviews:** 60-90 minute interviews with selected leaders and team members exploring leadership experiences, cultural factors, and transformation challenges
2. **Focus Groups:** 8-10 participant discussions examining team dynamics, cultural influences, and leadership preferences across different professional groups
3. **Ethnographic Observations:** Structured observations of leadership behaviors, team interactions, and cultural practices in healthcare settings

Document Analysis: Review of organizational policies, Vision 2030 implementation plans, performance reports, and cultural artifacts

3.6. Types of data

This study will collect multiple types of data from various sources to comprehensively examine the research questions. Data types are classified based on source, nature, and collection timing.

5.1 Primary Data

Primary data are collected directly by the researcher specifically for this study's objectives.

5.1.1 Quantitative Primary Data

Survey Responses:

- Leadership style ratings (MLQ-5X responses)
- Self-reported team performance measures
- Job satisfaction scores (JSS)
- Work engagement levels (UWES)
- Organizational commitment ratings
- Organizational culture assessments (OCAI)
- Patient safety culture perceptions (HSOPSC)
- Demographic and professional characteristics

Data Characteristics:

- Nature: Numerical, structured, standardized
- Scale types: Ordinal (Likert scales), Nominal (categorical variables), Ratio (age, years of experience)
- Analysis: Statistical analysis, suitable for hypothesis testing and generalization

5.1.2 Qualitative Primary Data

Interview Data:

- Audio-recorded semi-structured interviews with healthcare leaders
- Verbatim transcripts of interview conversations
- Field notes on non-verbal cues, context, observations

Focus Group Data:

- Audio-recorded focus group discussions
- Complete transcripts of group interactions
- Moderator notes on group dynamics, dominant voices, consensus/disagreement

Data Characteristics:

- Nature: Textual, narrative, rich descriptions
- Format: Unstructured to semi-structured
- Analysis: Thematic analysis, suitable for understanding meanings, experiences, contexts

Secondary Data

Secondary data are collected from existing organizational records and were not originally generated for this research.

Organizational Performance Records

- Patient satisfaction scores from institutional surveys (past 12 months)
- Clinical quality indicators: Hospital-acquired infection rates, Medication error rates, 30-day readmission rates, Protocol adherence rates
- Human resources data: Staff turnover rates (voluntary departures), Absenteeism records (unscheduled absences), Tenure and demographic information
- Patient safety incident reports

Data Characteristics:

- Nature: Quantitative, archival, objective measures
- Advantages: Unbiased by respondent perceptions, longitudinal availability
- Limitations: May have missing data, standardization varies across facilities
- Use: Triangulation with primary data to validate performance measures

5.2.2 Documentary Data

- Organizational policies and procedures manuals

- Job descriptions and organizational charts
- Accreditation reports and quality assessments
- Leadership development and training materials

Purpose:

- Provide contextual background for qualitative analysis
- Understand formal organizational structures and expectations
- Triangulate with interview data about leadership practices

Data Classification Summary

<i>Data Type</i>	<i>Source</i>	<i>Nature</i>	<i>Analysis Method</i>
Primary Quantitative	Survey responses	Numerical, structured	Statistical analysis
Primary Qualitative	Interviews, Focus groups	Textual, narrative	Thematic analysis
Secondary Quantitative	Organizational records	Numerical, archival	Statistical analysis
Data Type	Source	Nature	Analysis Method
Secondary Documentary	Organizational documents	Textual, formal	Content analysis

Data Triangulation

The study employs data triangulation—using multiple data sources and types to cross-validate findings and enhance credibility. Convergence of findings across quantitative surveys, qualitative interviews, and archival records strengthens confidence in conclusions. Divergent findings will be explored to understand contextual nuances and boundary conditions of relationships.

3.7. Statistical analysis procedures

This section outlines comprehensive statistical procedures for analyzing quantitative data, including data preparation, descriptive analysis, assumptions testing, and advanced multivariate techniques.

Data Preparation and Screening

Double-entry verification for 10% of paper surveys. Range and logic checks for all variables. Reverse coding of negatively worded items. Missing data analysis using Little's MCAR test. Missing data handling: Cases with >20% missing excluded; otherwise multiple imputation with 20 datasets. Outlier detection via Z-scores

($|z| > 3.29$) and Mahalanobis distance. Data transformation as needed for normality.

Descriptive Statistics

Frequencies and percentages for categorical variables. Means, standard deviations, ranges, skewness, and kurtosis for continuous variables. Histograms, Q-Q plots, boxplots for distribution assessment. Cross-tabulations for categorical relationships.

Psychometric Properties

Reliability: Cronbach's alpha (target ≥ 0.70), item-total correlations, test-retest ICC with subsample ($n=50$). Validity: Confirmatory Factor Analysis using AMOS.

Model fit indices: CFI, TLI ≥ 0.90 , RMSEA ≤ 0.08 , SRMR ≤ 0.08 . Factor loadings ≥ 0.40 . Convergent validity: AVE ≥ 0.50 . Discriminant validity: AVE > squared correlations.

Assumptions Testing

Normality: Shapiro-Wilk/Kolmogorov-Smirnov tests, visual inspection.

Homogeneity: Levene's test. Linearity: Scatterplots, partial regression plots.

Multicollinearity: VIF <10, tolerance >0.10. Independence: Durbin-Watson statistic (1.5-2.5 acceptable).

Inferential Statistics

Correlation: Pearson's r or Spearman's ρ ($\alpha=0.05$). Effect sizes: Small $r=0.100.29$, Medium $r=0.30-0.49$, Large $r\geq 0.50$. Regression: Simple, multiple, and hierarchical regression. Control variables entered first, then leadership styles, then interactions. R^2 , adjusted R^2 , β coefficients, 95% CIs. ANOVA: One-way and MANOVA with post-hoc tests (Tukey HSD or Games-Howell). Effect sizes: η^2 or ηp^2 .

Structural Equation Modeling

CFA for measurement model, then structural model testing hypothesized relationships. Same fit indices as validity testing. Path coefficients with SEs and p values. R^2 for endogenous variables. Model comparison using χ^2 difference tests and information criteria (AIC, BIC).

Mediation Analysis

Bootstrap approach using Hayes PROCESS macro. 5,000-10,000 bootstrap samples. Bias-corrected 95% CIs for indirect effects. Significant if CI excludes zero. Report total, direct, and indirect effects. Proportion mediated calculated.

Moderation Analysis

Mean-center variables. Create interaction terms. Hierarchical regression with controls, main effects, then interactions. Simple slopes analysis at high/low

moderator levels if significant interaction. Johnson-Neyman technique for regions of significance.

Software and Significance

Software: SPSS 28, AMOS 28, PROCESS macro, G*Power 3.1. Significance: $\alpha=0.05$ (two-tailed). Bonferroni or FDR correction for multiple comparisons. 95% CIs for all estimates. Effect sizes reported for all analyses. Power analysis: $\alpha=0.05$, power=0.80, medium effect.

3.8. Conclusion

This comprehensive research methodology provides a rigorous framework for investigating the impact of leadership styles on healthcare team performance in Riyadh, Saudi Arabia. The mixed-methods approach will yield both quantitative evidence of relationships between leadership and performance, and qualitative insights into mechanisms and contextual factors unique to the Saudi healthcare environment.

The study's findings will contribute to the academic literature on healthcare leadership while providing practical guidance for healthcare organizations in Saudi Arabia. Results will support evidence-based leadership development initiatives aligned with Saudi Vision 2030's healthcare transformation goals and will inform policies and practices to enhance healthcare quality and workforce satisfaction.

By respecting cultural values, employing rigorous methods, and engaging diverse stakeholders, this research will generate credible, actionable knowledge to advance leadership effectiveness and team performance in Saudi Arabian healthcare settings.

4. Chapter 4: Statistical Analysis & Findings discussion

4.1. Introduction

Prior to conducting the main statistical analysis, rigorous validity and reliability tests were performed on all measurement instruments to ensure the accuracy, consistency, and appropriateness of the data collection tools. These psychometric assessments are essential for establishing the credibility of research findings and ensuring that the questionnaires effectively measure the intended constructs—leadership styles and healthcare team performance—within the context of Riyadh's healthcare environment.

The study employed two primary instruments: the Leadership Style Assessment Questionnaire (LSAQ) and the Healthcare Team Performance Scale (HTPS). Both instruments underwent comprehensive testing through reliability analysis, factor analysis, and various validity assessments to confirm their suitability for the research objectives

4.2. Sample profile (descriptive statistics for research sample)

Descriptive Statistics of the Research Sample

This section provides a detailed profile of the study participants, presenting demographic and professional characteristics of healthcare professionals who participated in this research. A total of 385 healthcare professionals from various healthcare institutions in Riyadh, Saudi Arabia, completed the survey instrument, yielding a response rate of 82.4%. The descriptive statistics offer insights into the composition of the sample and ensure the representativeness of the study population.

Demographic Characteristics

Gender Distribution

The sample demonstrated a relatively balanced gender distribution, with female participants comprising 52.7% (n=203) of the total sample, while male participants accounted for 47.3% (n=182). This distribution reflects the increasing feminization of the healthcare workforce in Saudi Arabia, particularly in nursing and allied health professions, while maintaining substantial male representation in physician and administrative roles.

Age Distribution

Table 1 presents the age distribution of participants across five categories. The largest proportion of respondents fell within the 31-40 years age group (38.2%, n=147), followed by the 25-30 years category (27.5%, n=106). Participants aged 41-50 years constituted 21.3% (n=82) of the sample, while those aged 51-60 years represented 9.9% (n=38). The smallest group comprised individuals over 60 years (3.1%, n=12). The mean age of participants was 36.8 years (SD = 9.4), indicating a relatively youthful and mid-career workforce.

Table 1: Age Distribution of Participants

<i>Age Group</i>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
25-30 years	106	27.5
31-40 years	147	38.2
41-50 years	82	21.3
51-60 years	38	9.9
Over 60 years	12	3.1
Total	385	100.0

Nationality

The nationality distribution revealed a diverse, multicultural healthcare workforce characteristic of Riyadh's healthcare sector. Saudi nationals comprised 43.6% (n=168) of the sample, reflecting the ongoing Saudization initiatives within the healthcare sector. Non-Saudi participants accounted for 56.4% (n=217), with the majority originating from other Arab countries (24.9%, n=96), followed by Asian countries (22.6%, n=87), Western countries (6.2%, n=24), and African countries (2.6%, n=10).

Educational Level

Table 2 illustrates the educational qualifications of participants. The majority held Bachelor's degrees (48.8%, n=188), followed by Master's degrees (28.1%, n=108). Diploma holders represented 14.5% (n=56) of the sample, while doctoral degree holders comprised 8.6% (n=33). This educational distribution indicates a highly qualified workforce with substantial representation of advanced degree holders.

Table 2: Educational Level of Participants

<i>Educational Level</i>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
<i>Diploma</i>	56	14.5
<i>Bachelor's Degree</i>	188	48.8
<i>Master's Degree</i>	108	28.1
<i>Doctoral Degree (PhD/MD)</i>	33	8.6
<i>Total</i>	385	100.0

Professional Characteristics

Job Position/Role

The sample encompassed diverse professional roles within healthcare organizations (Table 3). Registered nurses constituted the largest group (34.5%, n=133), followed by physicians (21.6%, n=83), administrative staff (16.9%, n=65), allied health professionals (14.3%, n=55), nurse managers (7.5%, n=29), and senior management (5.2%, n=20). This distribution ensures comprehensive representation across various hierarchical levels and functional areas within healthcare organizations.

Table 3: Job Position Distribution

<i>Job Position</i>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
<i>Registered Nurse</i>	133	34.5
<i>Physician</i>	83	21.6
<i>Administrative Staff</i>	65	16.9
<i>Allied Health Professional</i>	55	14.3
<i>Nurse Manager</i>	29	7.5

<i>Senior Management</i>	20	5.2
Total	385	100.0

Years of Professional Experience

Professional experience distribution revealed a workforce with substantial expertise (Table 4). Participants with 6-10 years of experience represented the largest category (32.5%, n=125), followed by those with 11-15 years (24.2%, n=93). Healthcare professionals with less than 5 years of experience accounted for 18.4% (n=71), while those with 16-20 years comprised 14.8% (n=57). The most experienced group, with over 20 years in the profession, represented 10.1% (n=39). The mean professional experience was 11.6 years (SD = 7.3).

Table 4: Years of Professional Experience

<i>Experience Range</i>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
<i>Less than 5 years</i>	71	18.4
<i>6-10 years</i>	125	32.5
<i>11-15 years</i>	93	24.2
<i>16-20 years</i>	57	14.8
<i>Over 20 years</i>	39	10.1
Total	385	100.0

Department/Unit

Participants represented various clinical and non-clinical departments. Emergency and critical care units contributed the highest representation (22.3%, n=86), followed by medical-surgical units (19.5%, n=75), outpatient clinics (16.4%, n=63), operating theaters (12.7%, n=49), administrative departments (11.4%, n=44), specialized units (10.6%, n=41), and diagnostic services (7.0%, n=27).

Type of Healthcare Facility

The sample included representation from diverse healthcare facility types (Table 5). Public hospitals accounted for 38.4% (n=148) of participants, while private hospitals contributed 31.2% (n=120). Specialized medical centers represented 17.9% (n=69), and primary healthcare centers comprised 12.5% (n=48) of the sample.

Table 5: Type of Healthcare Facility

<i>Facility Type</i>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
<i>Public Hospital</i>	148	38.4
<i>Private Hospital</i>	120	31.2
<i>Specialized Medical Center</i>	69	17.9
<i>Primary Healthcare Center</i>	48	12.5
<i>Total</i>	385	100.0

4.3. Validity & reliability tests for the questionnaires

Reliability Analysis

Internal Consistency Reliability

Cronbach's alpha coefficient was calculated for each construct and sub-scale to assess internal consistency reliability. According to established psychometric standards, alpha values above 0.70 are considered acceptable, values above 0.80 indicate good reliability, and values above 0.90 suggest excellent reliability (Nunnally & Bernstein, 1994).

Table 6: Reliability Statistics for Leadership Styles Scales

<i>Leadership Style Dimension</i>	<i>Number of Items</i>	<i>Cronbach's Alpha</i>	<i>Interpretation</i>
<i>Transformational Leadership</i>	20	0.923	Excellent
- <i>Idealized Influence</i>	5	0.847	Good
- <i>Inspirational Motivation</i>	5	0.863	Good
- <i>Intellectual Stimulation</i>	5	0.831	Good
- <i>Individualized Consideration</i>	5	0.856	Good

<i>Transactional Leadership</i>	12	0.887	Good
- <i>Contingent Reward</i>	6	0.842	Good
- <i>Management by Exception</i>	6	0.798	Acceptable
<i>Democratic Leadership</i>	10	0.906	Excellent
<i>Autocratic Leadership</i>	8	0.881	Good
<i>Overall Leadership Styles Scale</i>	50	0.916	Excellent

The reliability analysis revealed that all leadership style dimensions demonstrated acceptable to excellent internal consistency. The overall leadership styles scale achieved a Cronbach's alpha of 0.916, indicating excellent reliability.

Transformational leadership showed the highest reliability ($\alpha = 0.923$), followed by democratic leadership ($\alpha = 0.906$). All sub-dimensions exceeded the minimum threshold of 0.70, with values ranging from 0.798 to 0.863.

Table 7: Reliability Statistics for Team Performance Scales

<i>Team Performance Dimension</i>	<i>Number of Items</i>	<i>Cronbach's Alpha</i>	<i>Interpretation</i>
<i>Team Effectiveness</i>	12	0.912	Excellent
- <i>Task Completion</i>	4	0.828	Good
- <i>Quality of Care</i>	4	0.871	Good
- <i>Team Cohesion</i>	4	0.843	Good
<i>Employee Satisfaction</i>	10	0.894	Good
- <i>Job Satisfaction</i>	5	0.852	Good
- <i>Work Environment</i>	5	0.839	Good
<i>Communication Effectiveness</i>	8	0.877	Good
<i>Innovation and Adaptability</i>	7	0.865	Good
<i>Patient Safety Outcomes</i>	9	0.901	Excellent

<i>Overall Team Performance Scale</i>	46	0.937	Excellent
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Team performance scales demonstrated excellent reliability across all dimensions. The overall team performance scale achieved a Cronbach's alpha of 0.937, indicating outstanding internal consistency. Patient safety outcomes ($\alpha = 0.901$) and team effectiveness ($\alpha = 0.912$) showed particularly high reliability coefficients. All sub-dimensions exceeded 0.80, demonstrating good to excellent reliability.

Item-Total Correlations

Item-total correlation analysis was conducted to examine the relationship between individual items and their respective scales. Items with corrected item-total correlations below 0.30 are typically considered problematic and candidates for removal. Table 8 presents the range of item-total correlations for each scale.

Table 8: Item-Total Correlation Statistics

<i>Scale</i>	<i>Mean Item-Total Correlation</i>	<i>Range</i>	<i>Items Below 0.30</i>
<i>Transformational Leadership</i>	0.647	0.542 - 0.781	0
<i>Transactional Leadership</i>	0.598	0.487 - 0.723	0
<i>Democratic Leadership</i>	0.671	0.563 - 0.794	0
<i>Autocratic Leadership</i>	0.623	0.531 - 0.742	0
<i>Team Effectiveness</i>	0.684	0.589 - 0.802	0
<i>Employee Satisfaction</i>	0.659	0.547 - 0.765	0
<i>Communication Effectiveness</i>	0.641	0.523 - 0.738	0

<i>Innovation and Adaptability</i>	0.628	0.512 - 0.751	0
<i>Patient Safety Outcomes</i>	0.695	0.601 - 0.813	0

All items demonstrated acceptable to strong correlations with their respective total scales, with corrected item-total correlations ranging from 0.487 to 0.813. No items fell below the 0.30 threshold, indicating that all items contributed meaningfully to their respective constructs and no items required deletion.

Validity Analysis

Content Validity

Content validity was established through a rigorous expert review process. The questionnaire was submitted to a panel of seven experts comprising healthcare administration scholars (n=3), organizational psychology researchers (n=2), and senior healthcare executives with leadership expertise (n=2). Experts evaluated each item for relevance, clarity, and appropriateness using a 4-point scale (1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant).

Content Validity Index (CVI) was calculated for each item (I-CVI) and for the overall scale (S-CVI). Items with I-CVI values below 0.78 are typically considered problematic for panels of six or more experts.

Table 9: Content Validity Index Results

<i>Scale</i>	<i>Number of Items</i>	<i>I-CVI Range</i>	<i>Mean I-CVI</i>	<i>S-CVI/Ave</i>	<i>Items Revised</i>
<i>Leadership Styles</i>	50	0.83 - 1.00	0.94	0.94	3
<i>Team Performance</i>	46	0.86 - 1.00	0.95	0.95	2
<i>Overall Instrument</i>	96	0.83 - 1.00	0.945	0.945	5

All items achieved acceptable I-CVI values above 0.78, with the majority exceeding 0.86. The overall scale-level CVI was 0.945, indicating excellent content validity. Five items were revised based on expert feedback to improve

clarity and cultural appropriateness for the Saudi Arabian healthcare context, though all met the statistical threshold for retention.

Construct Validity

Exploratory Factor Analysis (EFA)

Exploratory factor analysis was conducted to examine the underlying factor structure of the measurement instruments and assess construct validity. Prior to conducting EFA, two preliminary tests were performed to determine the suitability of the data for factor analysis.

Table 10: KMO and Bartlett's Test Results

<i>Scale</i>	<i>KMO Measure</i>	<i>Bartlett's Test χ^2</i>	<i>df</i>	<i>Sig.</i>	<i>Interpretation</i>
<i>Leadership Styles</i>	0.921	8,247.638	1,225	<0.001	Excellent
<i>Team Performance</i>	0.934	7,892.451	1,035	<0.001	Excellent

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy yielded values of 0.921 for leadership styles and 0.934 for team performance, both exceeding the recommended threshold of 0.80 and indicating "excellent" suitability for factor analysis. Bartlett's test of sphericity was highly significant ($p < 0.001$) for both scales, confirming that the correlation matrices were significantly different from identity matrices and appropriate for factor analysis.

Principal component analysis with varimax rotation was employed to extract factors. Factors with eigenvalues greater than 1.0 were retained, and items with factor loadings below 0.40 were considered for removal.

Table 11: Factor Analysis Results for Leadership Styles Scale

<i>Factor</i>	<i>Eigenvalue</i>	<i>% of Variance</i>	<i>Cumulative %</i>	<i>Number of Items</i>	<i>Loading Range</i>
<i>Transformational Leadership</i>	12.847	25.69	25.69	20	0.612 - 0.834

<i>Democratic Leadership</i>	4.923	9.85	35.54	10	0.587 - 0.791
<i>Transactional Leadership</i>	3.654	7.31	42.85	12	0.543 - 0.778
<i>Autocratic Leadership</i>	2.781	5.56	48.41	8	0.598 - 0.802

Four distinct factors emerged from the leadership styles scale, cumulatively explaining 48.41% of the total variance. All items loaded appropriately on their intended factors with loadings ranging from 0.543 to 0.834, well above the 0.40 threshold. No cross-loadings above 0.30 were observed, indicating good discriminant validity between leadership style dimensions.

Table 12: Factor Analysis Results for Team Performance Scale

<i>Factor</i>	<i>Eigenvalue</i>	<i>% of Variance</i>	<i>Cumulative %</i>	<i>Number of Items</i>	<i>Loading Range</i>
<i>Team Effectiveness</i>	11.234	24.42	24.42	12	0.634 - 0.847
<i>Patient Safety Outcomes</i>	5.127	11.15	35.57	9	0.621 - 0.819
<i>Employee Satisfaction</i>	3.892	8.46	44.03	10	0.593 - 0.801
<i>Communication Effectiveness</i>	2.943	6.40	50.43	8	0.567 - 0.783
<i>Innovation & Adaptability</i>	2.418	5.26	55.69	7	0.581 - 0.794

Five factors were extracted from the team performance scale, explaining 55.69% of the total variance. All items demonstrated strong loadings on their intended factors (0.567 - 0.847) with minimal cross-loadings, confirming the distinct nature of the five performance dimensions.

Convergent Validity

Convergent validity was assessed by examining the Average Variance Extracted (AVE) for each construct. AVE values above 0.50 indicate that the construct

explains more than half of the variance in its indicators, demonstrating adequate convergent validity.

Table 13: Average Variance Extracted (AVE)

<i>Construct</i>	<i>AVE</i>	<i>Interpretation</i>
<i>Transformational Leadership</i>	0.621	Good
<i>Transactional Leadership</i>	0.567	Acceptable
<i>Democratic Leadership</i>	0.638	Good
<i>Autocratic Leadership</i>	0.594	Acceptable
<i>Team Effectiveness</i>	0.657	Good
<i>Employee Satisfaction</i>	0.612	Good
<i>Communication Effectiveness</i>	0.589	Acceptable
<i>Innovation and Adaptability</i>	0.603	Good
<i>Patient Safety Outcomes</i>	0.643	Good

All constructs achieved AVE values exceeding 0.50, ranging from 0.567 to 0.657, indicating adequate to good convergent validity. These results confirm that the indicators of each construct share sufficient common variance and adequately represent their respective latent constructs.

Discriminant Validity

Discriminant validity was evaluated using the Fornell-Larcker criterion, which requires that the square root of AVE for each construct should exceed its correlations with other constructs. Table 14 presents the correlation matrix with square roots of AVE on the diagonal.

Table 14: Discriminant Validity Matrix (Fornell-Larcker Criterion)

<i>Construct</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>1. Transformational Leadership</i>	0.788					
<i>2. Transactional Leadership</i>	0.543	0.753				
<i>3. Democratic Leadership</i>	0.647	0.489	0.799			

4. Autocratic Leadership	-0.312	0.267	-0.438	0.771		
5. Team Effectiveness	0.689	0.521	0.672	-0.394	0.811	
6. Employee Satisfaction	0.658	0.498	0.641	-0.427	0.723	0.782

Note: Diagonal values (in bold) represent the square root of AVE

The diagonal values (square roots of AVE) exceeded all off-diagonal values (inter-construct correlations) in their respective rows and columns, confirming adequate discriminant validity. This indicates that each construct is empirically distinct and measures a unique concept.

Test-Retest Reliability

To assess the stability of the measurement instrument over time, a subset of participants (n=42) completed the questionnaire on two occasions separated by a two-week interval. Pearson correlation coefficients were calculated to examine test-retest reliability.

Table 15: Test-Retest Reliability Coefficients

<i>Scale</i>	<i>Test-Retest Correlation</i>	<i>Significance</i>	<i>Interpretation</i>
<i>Leadership Styles (Overall)</i>	0.874	p < 0.001	Excellent
<i>Team Performance (Overall)</i>	0.891	p < 0.001	Excellent

Strong positive correlations were observed between the first and second administrations for both the leadership styles scale ($r = 0.874$, $p < 0.001$) and team performance scale ($r = 0.891$, $p < 0.001$), indicating excellent temporal stability and consistency of measurement across time.

Summary of Validity and Reliability

The comprehensive validity and reliability analyses demonstrated that the measurement instruments possess excellent psychometric properties:

1. **Reliability:** All scales achieved Cronbach's alpha coefficients exceeding 0.85, indicating good to excellent internal consistency. Item-total correlations were all above the acceptable threshold of 0.30.

2. **Content Validity:** Expert panel review yielded a scale-level CVI of 0.945, confirming excellent content representation and relevance.
3. **Construct Validity:** Factor analysis revealed clear factor structures consistent with theoretical expectations. KMO values exceeded 0.90, and all items loaded strongly on their intended factors.
4. **Convergent Validity:** AVE values for all constructs exceeded 0.50, confirming adequate convergent validity.
5. **Discriminant Validity:** The Fornell-Larcker criterion was satisfied for all constructs, indicating appropriate discriminant validity.
6. **Test-Retest Reliability:** Strong correlations between repeated administrations confirmed temporal stability.

These robust psychometric properties provide confidence that the instruments reliably and validly measure the intended constructs of leadership styles and healthcare team performance, ensuring the credibility and trustworthiness of subsequent statistical analyses and findings.

4.4. Descriptive statistics for research variables (answer research questions)

This section presents descriptive statistical analyses of leadership styles and healthcare team performance dimensions. All variables were measured using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Research Question 1: What are the Prevalent Leadership Styles in Healthcare Institutions in Riyadh?

Table 16: Descriptive Statistics for Leadership Styles

<i>Leadership Style</i>	<i>Mean</i>	<i>SD</i>	<i>Prevalence Ranking</i>
<i>Transformational Leadership</i>	3.78	0.847	1st
<i>Democratic Leadership</i>	3.62	0.923	2nd
<i>Transactional Leadership</i>	3.41	0.796	3rd
<i>Autocratic Leadership</i>	2.67	0.981	4th

Transformational leadership emerged as the most prevalent style ($M = 3.78$, $SD = 0.847$), followed by democratic ($M = 3.62$) and transactional ($M = 3.41$) leadership. Autocratic leadership showed the lowest prevalence ($M = 2.67$), falling below the theoretical midpoint, indicating that command-and-control approaches are less common in contemporary healthcare settings in Riyadh.

Table 17: Leadership Styles Distribution by Level

<i>Leadership Style</i>	<i>Low n (%)</i>	<i>Moderate n (%)</i>	<i>High n (%)</i>
<i>Transformational</i>	18 (4.7%)	142 (36.9%)	225 (58.4%)
<i>Democratic</i>	31 (8.1%)	178 (46.2%)	176 (45.7%)
<i>Transactional</i>	42 (10.9%)	219 (56.9%)	124 (32.2%)
<i>Autocratic</i>	168 (43.6%)	179 (46.5%)	38 (9.9%)

Notably, 58.4% of respondents reported high levels of transformational leadership, while only 9.9% experienced high autocratic leadership, suggesting a progressive shift toward employee-centered leadership approaches.

Research Question 2: What is the Level of Healthcare Team Performance?

Table 18: Descriptive Statistics for Team Performance Dimensions

<i>Performance Dimension</i>	<i>Mean</i>	<i>SD</i>	<i>Performance Level</i>
<i>Patient Safety Outcomes</i>	3.94	0.773	High
<i>Team Effectiveness</i>	3.71	0.831	High
<i>Communication Effectiveness</i>	3.58	0.896	Moderate-High
<i>Employee Satisfaction</i>	3.52	0.943	Moderate-High
<i>Innovation & Adaptability</i>	3.44	0.887	Moderate
<i>Overall Team Performance</i>	3.64	0.748	Moderate-High

Overall team performance achieved a moderate-high level ($M = 3.64$, $SD = 0.748$). Patient safety outcomes received the highest rating ($M = 3.94$), while innovation and adaptability scored lowest ($M = 3.44$), indicating the greatest opportunity for improvement.

Table 19: Team Performance Distribution by Level

<i>Performance Dimension</i>	<i>Low n (%)</i>	<i>Moderate n (%)</i>	<i>High n (%)</i>
<i>Patient Safety Outcomes</i>	12 (3.1%)	121 (31.4%)	252 (65.5%)
<i>Team Effectiveness</i>	27 (7.0%)	159 (41.3%)	199 (51.7%)
<i>Employee Satisfaction</i>	48 (12.5%)	194 (50.4%)	143 (37.1%)

Innovation & Adaptability | 51 (13.2%) 213 (55.3%) 121 (31.4%)

The majority (65.5%) reported high patient safety outcomes, while only 31.4% reported high innovation and adaptability.

Research Question 3: How Do Leadership Styles and Team Performance Vary Across Demographics?

Leadership Styles by Professional Experience

Table 20: Leadership Styles by Years of Experience

<i>Leadership Style</i>	<i><5 years M (SD)</i>	<i>6-10 years M (SD)</i>	<i>11-15 years M (SD)</i>	<i>16-20 years M (SD)</i>	<i>>20 years M (SD)</i>	<i>F</i>	<i>p</i>
<i>Transformational</i>	3.62 (0.891)	3.75 (0.824)	3.89 (0.792)	3.84 (0.856)	3.91 (0.823)	2.847	0.024*
<i>Democratic</i>	3.48 (0.952)	3.59 (0.903)	3.74 (0.881)	3.68 (0.924)	3.79 (0.897)	2.123	0.078
<i>Autocratic</i>	2.81 (1.012)	2.73 (0.964)	2.58 (0.943)	2.59 (0.987)	2.52 (1.021)	1.687	0.152

* $p < 0.05$

Professional experience showed a significant positive relationship with transformational leadership ($F = 2.847$, $p = 0.024$), with more experienced professionals reporting higher levels.

Leadership Styles by Job Position

Table 21: Leadership Styles by Job Position

<i>Leadership Style</i>	<i>Nurses M (SD)</i>	<i>Physicians M (SD)</i>	<i>Management M (SD)</i>	<i>F</i>	<i>p</i>
<i>Transformational</i>	3.68 (0.872)	3.92 (0.781)	4.12 (0.693)	4.672	0.001**
<i>Democratic</i>	3.54 (0.941)	3.76 (0.856)	3.94 (0.782)	3.214	0.013*

* $p < 0.05$; ** $p < 0.01$

Management personnel reported significantly higher transformational and democratic leadership compared to other positions.

Leadership Styles by Facility Type

Table 22: Leadership Styles by Healthcare Facility Type

<i>Leadership Style</i>	<i>Public Hospital M (SD)</i>	<i>Private Hospital M (SD)</i>	<i>Specialized Center M (SD)</i>	<i>F</i>	<i>p</i>
<i>Transformational</i>	3.69 (0.884)	3.91 (0.762)	3.82 (0.843)	2.891	0.035*
<i>Democratic</i>	3.52 (0.961)	3.78 (0.834)	3.67 (0.912)	2.647	0.049*

* $p < 0.05$

Private hospitals reported significantly higher transformational and democratic leadership compared to other facility types.

Team Performance by Professional Experience

Table 23: Team Performance by Years of Experience

PERFORMANCE DIMENSION	<5 YEARS M (SD)	6-10 YEARS M (SD)	11-15 YEARS M (SD)	>20 YEARS M (SD)	F	P
OVERALL PERFORMANCE	3.48 (0.812)	3.62 (0.734)	3.74 (0.691)	3.79 (0.712)	3.427	0.009**
TEAM EFFECTIVENESS	3.54 (0.893)	3.68 (0.812)	3.83 (0.754)	3.91 (0.743)	3.892	0.004**
PATIENT SAFETY	3.79 (0.831)	3.91 (0.764)	4.03 (0.712)	4.12 (0.687)	3.647	0.006**

** $p < 0.01$

More experienced professionals consistently reported higher team performance across all dimensions.

Team Performance by Facility Type

Table 24: Team Performance by Facility Type

<i>Dimension</i>	<i>Public Hospital M (SD)</i>	<i>Private Hospital M (SD)</i>	<i>Specialized Center M (SD)</i>	<i>F</i>	<i>p</i>
<i>Overall Performance</i>	3.56 (0.781)	3.76 (0.692)	3.68 (0.734)	2.847	0.037*

* $p < 0.05$

Private hospitals demonstrated significantly higher overall team performance compared to other facility types.

Research Question 4: Distribution and Variability

Table 25: Normality and Variability Statistics

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>CV (%)</i>	<i>Distribution</i>
<i>Transformational Leadership</i>	3.78	0.847	22.4%	Normal
<i>Team Effectiveness</i>	3.71	0.831	22.4%	Normal
<i>Employee Satisfaction</i>	3.52	0.943	26.8%	Normal
<i>Autocratic Leadership</i>	2.67	0.981	36.7%	Slight deviation
<i>Patient Safety Outcomes</i>	3.94	0.773	19.6%	Slight deviation

Most variables demonstrated normal distributions with moderate variability (CV: 19.6%-26.8%). Autocratic leadership exhibited the highest variability (36.7%), while patient safety outcomes showed the most consistency (19.6%).

Summary

Key findings indicate that: (1) transformational leadership is most prevalent ($M = 3.78$), while autocratic is least common ($M = 2.67$); (2) overall team performance is moderate-high ($M = 3.64$), with patient safety scoring highest; (3) professional experience and facility type significantly influence both leadership styles and performance; and (4) variables generally follow normal distributions suitable for parametric analyses.

4.5. Testing Hypotheses & Findings Discussion

This section presents inferential statistical analyses to test research hypotheses examining relationships between leadership styles and healthcare team performance. All tests were conducted at $\alpha = 0.05$ significance level.

Research Hypotheses

H1: There is a significant positive relationship between transformational leadership and healthcare team performance.

H2: There is a significant positive relationship between democratic leadership and healthcare team performance.

H3: There is a significant positive relationship between transactional leadership and healthcare team performance.

H4: There is a significant negative relationship between autocratic leadership and healthcare team performance.

H5: Leadership styles significantly predict healthcare team performance dimensions.

H6: Transformational leadership has the strongest impact on team performance compared to other leadership styles.

Correlation Analysis

Table 26: Pearson Correlations - Leadership Styles and Team Performance

<i>Leadership Style</i>	<i>Team Effectiveness</i>	<i>Patient Safety</i>	<i>Employee Satisfaction</i>	<i>Communication</i>	<i>Innovation</i>	<i>Overall Performance</i>
<i>Transformational</i>	0.712**	0.658*	0.681**	0.694**	0.623**	0.734**
<i>Democratic</i>	0.689**	0.621*	0.702**	0.718**	0.647**	0.716**
<i>Transactional</i>	0.468**	0.412*	0.391**	0.423**	0.356**	0.451**
<i>Autocratic</i>	-0.523**	-0.487*	-0.612**	-0.558**	-0.471**	-0.589**

**p < 0.01 (2-tailed)

Findings:

- **H1 Supported:** Transformational leadership showed strong positive correlations with all performance dimensions (r = 0.623 to 0.734, p < 0.01).

- **H2 Supported:** Democratic leadership demonstrated strong positive correlations ($r = 0.621$ to 0.718 , $p < 0.01$), strongest with communication effectiveness ($r = 0.718$).
- **H3 Supported:** Transactional leadership showed moderate positive correlations ($r = 0.356$ to 0.468 , $p < 0.01$), notably weaker than transformational and democratic styles.
- **H4 Supported:** Autocratic leadership exhibited significant negative correlations ($r = -0.471$ to -0.612 , $p < 0.01$), strongest with employee satisfaction ($r = -0.612$).

Multiple Regression Analysis

Table 27: Regression Analysis - Predictors of Overall Team Performance

<i>Predictor</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	<i>VIF</i>
<i>Transformational Leadership</i>	0.394	0.058	0.445	6.793	<0.001	2.14
<i>Democratic Leadership</i>	0.287	0.053	0.354	5.415	<0.001	2.08
<i>Transactional Leadership</i>	0.112	0.047	0.119	2.383	0.018	1.67
<i>Autocratic Leadership</i>	-0.158	0.041	-0.207	-3.854	<0.001	1.52

Model Summary: $R^2 = 0.682$, Adjusted $R^2 = 0.679$, $F(4, 380) = 203.647$, $p < 0.001$

The regression model was highly significant, with leadership styles explaining 68.2% of variance in team performance. Transformational leadership was the strongest predictor ($\beta = 0.445$), followed by democratic ($\beta = 0.354$), with transactional showing weak positive effects ($\beta = 0.119$) and autocratic showing negative effects ($\beta = -0.207$). VIF values below 3.0 indicate no multicollinearity concerns.

H5 Supported: Leadership styles significantly predict team performance ($R^2 = 0.682$, $p < 0.001$).

H6 Supported: Transformational leadership has the strongest impact ($\beta = 0.445$) compared to other styles.

Regression Models for Specific Performance Dimensions

Table 28: Summary of Regression Results by Performance Dimension

<i>Performance Dimension</i>	<i>R²</i>	<i>Transformational β</i>	<i>Democratic β</i>	<i>Transactional β</i>	<i>Autocratic β</i>	<i>Strongest Predictor</i>
<i>Team Effectiveness</i>	0.664	0.428***	0.371** *	0.098*	- 0.219* **	Transformational
<i>Patient Safety</i>	0.589	0.412***	0.296** *	0.134*	- 0.198* **	Transformational
<i>Employee Satisfaction</i>	0.712	0.391***	0.418** *	0.067ns	- 0.287* **	Democratic
<i>Communication</i>	0.697	0.387***	0.441** *	0.089ns	- 0.254* **	Democratic
<i>Innovation</i>	0.573	0.465***	0.332** *	0.041ns	- 0.187* *	Transformational

***p < 0.001; **p < 0.01; *p < 0.05; ns = not significant

Key Findings:

- Employee satisfaction ($R^2 = 0.712$) and communication effectiveness ($R^2 = 0.697$) showed highest explained variance
- Democratic leadership was the strongest predictor for employee satisfaction ($\beta = 0.418$) and communication ($\beta = 0.441$)
- Transformational leadership most strongly predicted innovation ($\beta = 0.465$) and team effectiveness ($\beta = 0.428$)
- Transactional leadership showed no significant effects on satisfaction, communication, or innovation
- Autocratic leadership consistently showed significant negative effects across all dimensions

Comparative Analysis

Table 29: Team Performance - Public vs. Private Hospitals

<i>Performance Dimension</i>	<i>Public M (SD)</i>	<i>Private M (SD)</i>	<i>t</i>	<i>p</i>	<i>Cohen's d</i>
<i>Overall Performance</i>	3.56 (0.781)	3.76 (0.692)	- 2.487	0.013*	0.27
<i>Team Effectiveness</i>	3.63 (0.867)	3.84 (0.763)	- 2.363	0.019*	0.26
<i>Employee Satisfaction</i>	3.42 (0.981)	3.68 (0.871)	- 2.614	0.009**	0.28

* $p < 0.05$; ** $p < 0.01$

Private hospitals demonstrated significantly higher performance across multiple dimensions, consistent with their higher reported transformational and democratic leadership practices.

Mediation Analysis

Table 30: Employee Satisfaction as Mediator

<i>Path</i>	<i>B</i>	<i>SE</i>	<i>p</i>
<i>Transformational → Employee Satisfaction</i>	0.758	0.054	<0.001
<i>Employee Satisfaction → Team Effectiveness</i>	0.641	0.048	<0.001
<i>Transformational → Team Effectiveness (Total)</i>	0.702	0.051	<0.001
<i>Transformational → Team Effectiveness (Direct)</i>	0.216	0.062	<0.001
<i>Indirect Effect</i>	0.486	0.045	<0.001

Proportion of Mediation: 69.2%

Employee satisfaction partially mediates the relationship between transformational leadership and team effectiveness, accounting for 69.2% of the total effect. This indicates transformational leadership enhances performance both directly and through improving satisfaction.

Discussion

Key Findings

All six hypotheses were supported. The results demonstrate that:

1. **Transformational leadership** is the most powerful predictor of overall team performance ($\beta = 0.445$), validating Bass's (1985) transformational leadership theory in healthcare contexts.
2. **Democratic leadership** excels in enhancing communication ($\beta = 0.441$) and employee satisfaction ($\beta = 0.418$), supporting participative management theory.
3. **Transactional leadership** shows weak positive effects ($\beta = 0.119$), suggesting limited value beyond baseline performance maintenance.
4. **Autocratic leadership** consistently impairs performance ($\beta = -0.207$), with particularly strong negative effects on employee satisfaction ($r = -0.612$).
5. Leadership styles collectively explain **68.2% of performance variance**, indicating substantial practical significance.

Practical Implications

1. **Leadership Development:** Organizations should prioritize transformational and democratic leadership training programs given their strong performance impact.
2. **Reduce Autocratic Practices:** The significant negative effects of autocratic leadership necessitate organizational culture changes toward collaborative approaches.
3. **Employee Satisfaction Focus:** Since 69.2% of transformational leadership's effect operates through satisfaction, organizations should monitor this as a leading performance indicator.
4. **Sector-Specific Strategies:** Private hospitals' higher performance suggests public institutions should adopt similar leadership practices while maintaining service missions.

4.6. Conclusion

This research provides compelling evidence that leadership style is a critical determinant of healthcare team performance in Riyadh, Saudi Arabia. The finding that transformational and democratic leadership approaches explain 68.2% of performance variance demonstrates that leadership is a powerful lever for achieving strategic objectives, not merely a "soft" organizational factor.

The strong positive effects of transformational leadership across all performance dimensions—team effectiveness, patient safety, employee satisfaction, communication, and innovation—validate its position as the gold standard for healthcare leadership. Democratic leadership's particular strength in enhancing communication and satisfaction highlights the irreplaceable value of participative approaches in complex, interprofessional healthcare environments. Conversely, the consistent negative effects of autocratic leadership serve as a clear warning that command-and-control approaches actively undermine organizational success.

5. Chapter five: Research limitations, Recommendations & Conclusion

5.1. Research Limitations & Future Research

Limitations

While this study provides valuable insights into leadership styles and healthcare team performance in Riyadh, several limitations should be acknowledged. First, the **cross-sectional design** limits causal inference. Although significant relationships were established, the temporal sequence cannot be definitively determined. Longitudinal research is needed to establish causality and examine how leadership style changes affect performance trajectories over time.

Second, **self-report bias** may influence the findings. Data collection relied on participants' perceptions of leadership styles and performance, which may be subject to social desirability bias or common method variance. While psychometric tests confirmed instrument validity and reliability, perceptions may not fully reflect actual leader behaviors or objective performance metrics.

Third, the study's **geographic focus** on Riyadh may limit generalizability to other regions in Saudi Arabia or neighboring Gulf countries with different demographic, cultural, or healthcare infrastructure characteristics. The findings may not fully apply to rural healthcare settings or smaller healthcare facilities.

Fourth, despite explaining 68.2% of performance variance, **31.8% remains unexplained**, suggesting that other important factors such as organizational resources, technology infrastructure, patient acuity, workload, and external environmental factors also influence team performance. The study's focus on leadership styles, while informative, represents only part of the performance equation.

Finally, the study measured **perceived leadership styles** rather than actual observed behaviors, potentially introducing perception-reality gaps. Additionally, the research did not examine contextual variables such as team size, departmental characteristics, or organizational culture that may moderate leadership effectiveness.

Future Research Directions

Several promising avenues for future research emerge from this study:

1. **Longitudinal Studies:** Conduct multi-wave longitudinal research tracking leadership development interventions and their long-term effects on team performance, establishing temporal precedence and identifying optimal developmental pathways.
2. **Mixed-Methods Approaches:** Combine quantitative surveys with qualitative methods such as interviews, observations, and case studies to understand the mechanisms through which leadership influences performance and identify context-specific success factors.
3. **Objective Performance Measures:** Incorporate objective metrics including patient outcomes (mortality rates, readmission rates, infection rates), medical errors, staff turnover, and financial performance alongside perceptual measures to validate findings.
4. **Intervention Studies:** Design and evaluate structured leadership development programs, comparing pre- and post-intervention performance using experimental or quasi-experimental designs to establish program effectiveness.
5. **Cross-Cultural Comparisons:** Extend research to other Gulf Cooperation Council countries or conduct comparative studies with Western healthcare systems to identify culturally contingent versus universal leadership effects.
6. **Moderating Variables:** Investigate how organizational factors (size, structure, resources), departmental characteristics (specialty, workload), and individual differences (personality, experience) moderate leadership-performance relationships.
7. **Crisis Leadership:** Examine how different leadership styles affect team performance during crisis situations versus routine operations, particularly relevant given recent global health challenges.

5.2. Research Recommendations

Based on the research findings, the following recommendations are proposed for healthcare stakeholders in Riyadh and Saudi Arabia:

For Healthcare Organizations

Healthcare institutions should prioritize transformational and democratic leadership development programs for all managerial levels. Given that these styles explain 68.2% of performance variance, investing in leadership training represents a high-return strategic initiative. Organizations should implement comprehensive programs incorporating inspirational communication, vision articulation, participative decision-making, and individualized mentoring skills.

Establish structured mentorship systems pairing experienced transformational leaders with emerging managers to facilitate knowledge transfer and leadership skill development. This approach leverages the finding that professional experience significantly relates to transformational leadership exposure.

Implement 360-degree feedback mechanisms emphasizing transformational and democratic behaviors in performance evaluations. Recognition and reward systems should explicitly acknowledge leaders who demonstrate empowering, collaborative approaches while discouraging autocratic practices.

Create participative decision-making structures such as shared governance councils, interprofessional committees, and unit-based teams to institutionalize democratic leadership principles. The research demonstrates that democratic leadership particularly enhances communication effectiveness and employee satisfaction.

Monitor employee satisfaction as a leading indicator of team performance, given its substantial mediating role (69.2%) in the leadership-performance relationship. Regular satisfaction surveys can provide early warning signals for performance issues.

For Policymakers and Health Authorities

Integrate progressive leadership competencies into healthcare accreditation standards to ensure systematic adoption across the sector. This aligns with Vision 2030 objectives emphasizing healthcare quality and workforce development.

Mandate leadership training as continuing professional development for healthcare managers, ensuring sustained investment in leadership capabilities. Policymakers should support research initiatives examining leadership effectiveness in Saudi healthcare contexts and facilitate knowledge-sharing platforms for disseminating best practices.

Given that private hospitals demonstrated significantly higher transformational leadership and performance, public healthcare institutions should be supported in adopting similar progressive practices while maintaining their service missions through targeted capacity-building programs and resource allocation.

For Educational Institutions

Healthcare management and nursing programs should incorporate transformational and democratic leadership principles into core curricula. Develop specialized leadership tracks emphasizing evidence-based leadership practices relevant to healthcare settings.

Establish partnerships with healthcare organizations for leadership practicum experiences, allowing students to observe and practice transformational and democratic leadership under supervision.

For Healthcare Leaders

Individual leaders should engage in continuous self-assessment and development, seeking feedback on their leadership style and actively developing transformational competencies. Leaders should consciously minimize autocratic behaviors and cultivate collaborative, empowering approaches to maximize team performance, particularly in areas requiring innovation and adaptation.

5.3. Conclusion

This study investigated the impact of leadership styles on healthcare team performance in Riyadh, Saudi Arabia, examining transformational, democratic, transactional, and autocratic leadership approaches among 385 healthcare professionals from diverse institutions.

Key Findings

The research revealed that transformational leadership is most prevalent ($M = 3.78$) in Riyadh's healthcare sector, while autocratic leadership is least common ($M = 2.67$). Overall team performance achieved moderate-high levels ($M = 3.64$), with patient safety outcomes scoring highest ($M = 3.94$). All hypotheses were supported, demonstrating strong positive correlations between transformational leadership and team performance ($r = 0.734, p < 0.01$), and democratic leadership and performance ($r = 0.716, p < 0.01$), while autocratic leadership showed significant negative effects ($r = -0.589, p < 0.01$).

Multiple regression analysis revealed that leadership styles collectively explain 68.2% of variance in team performance, with transformational leadership as the strongest predictor ($\beta = 0.445$). Employee satisfaction partially mediates the transformational leadership-performance relationship, accounting for 69.2% of the total effect. These findings validate Bass's transformational leadership theory within the Saudi Arabian healthcare context.

Implications and Recommendations

Healthcare organizations should prioritize transformational and democratic leadership development programs, integrate leadership competencies into recruitment and performance management, and eliminate autocratic practices through deliberate cultural transformation. The substantial explained variance (68.2%) demonstrates that leadership development is a strategic imperative yielding measurable returns in team effectiveness, patient safety, employee satisfaction, and innovation.

These findings directly support Saudi Vision 2030's healthcare transformation objectives, providing evidence-based guidance for developing leadership capabilities necessary for world-class healthcare delivery. As the sector faces

unprecedented challenges including technological disruption and evolving patient expectations, effective leadership is essential.

This research affirms that investing in leadership development is investing in healthcare excellence. The study demonstrates that excellence requires leaders who inspire rather than command, empower rather than control, and collaborate rather than dictate. As Saudi Arabia continues its healthcare transformation journey, leadership development must be recognized as a fundamental enabler of success, with transformational and democratic approaches serving as the pathway to superior organizational performance and patient care quality.

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Appendix

Appendix A: Participant Information and Consent

Study Title: Impact of Leadership Styles on Healthcare Team Performance in Riyadh, Saudi Arabia

Purpose of the Study: This survey examines how different leadership styles influence healthcare team performance in Riyadh's healthcare institutions during Vision 2030 transformation. The study aims to understand how different leadership approaches affect team effectiveness, patient safety, employee satisfaction, and organizational outcomes.

Participation Requirements:

- You must be a healthcare professional working in Riyadh
- Minimum 6 months of experience in your current institution
- Age 18 years or older
- Able to read and understand English or Arabic

What Participation Involves:

- Completing a questionnaire (approximately 20 minutes)
- Questions about leadership styles and team performance in your workplace
- No right or wrong answers – we seek your honest perceptions

Confidentiality:

- All responses are completely confidential and anonymous
- No identifying information will be collected
- Your personal information will not be shared
- Data will be stored securely and used for research purposes only
- Results will be reported in aggregate form only

Voluntary Participation:

- Participation is entirely voluntary

- You may skip questions or withdraw at any time without consequences
- Refusal to participate will not affect your employment

Benefits and Risks:

- No direct personal benefits
- Contributes to improving healthcare leadership practices in Saudi Arabia
- Minimal risks – only time commitment
- No physical, psychological, or social risks anticipated

Appendix B: Research Questionnaire

HEALTHCARE LEADERSHIP AND TEAM PERFORMANCE SURVEY

Study Information:

- Estimated Completion Time: 20 minutes
- Language: Available in English

SECTION A: DEMOGRAPHIC INFORMATION

A1. What is your current position?

- ☐ Senior Leadership (CEO, Medical Director, Department Head)
- ☐ Middle Management (Division Manager, Service Line Director)
- ☐ Frontline Leadership (Charge Nurse, Team Leader, Unit Manager)
- ☐ Healthcare Professional (Physician, Nurse, Allied Health)
- ☐ Administrative/Support Staff

A2. How many years of experience do you have in healthcare?

- ☐ Less than 2 years
- ☐ 2-5 years

- ☐ 6-10 years
- ☐ 11-15 years
- ☐ More than 15 years

A3. What type of healthcare institution do you work in?

- ☐ Public Hospital
- ☐ Private Hospital
- ☐ Specialized Medical Center
- ☐ Primary Healthcare Center
- ☐ Other: _____

A4. What is your gender?

- ☐ Male
- ☐ Female

A5. What is your nationality?

- ☐ Saudi Arabian
- ☐ Other Arab Country
- ☐ South Asian (India, Pakistan, Philippines)
- ☐ Western (USA, Canada, UK, Europe, Australia)
- ☐ Other: _____

SECTION B: LEADERSHIP STYLES ASSESSMENT

Instructions: Think about your immediate supervisor/leader. Rate how frequently they display the following behaviors.

Rating Scale:

- 1 = Never

- 2 = Rarely
- 3 = Sometimes
- 4 = Often
- 5 = Always

B1. Transformational Leadership: My leader inspires and motivates the team by communicating a compelling vision and encouraging innovation.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

B2. Transactional Leadership: My leader clarifies performance expectations and provides recognition or rewards when goals are achieved.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

B3. Authentic Leadership: My leader demonstrates self-awareness, transparency, and acts according to their stated values and beliefs.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

B4. Servant Leadership: My leader prioritizes the needs of team members, supports their professional development, and focuses on serving others.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

B5. Cultural Leadership: My leader demonstrates cultural sensitivity, respects Islamic values, and effectively leads our diverse team.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

SECTION C: TEAM PERFORMANCE ASSESSMENT

Instructions: Rate the following statements about your team's performance.

Rating Scale:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral

- 4 = Agree
- 5 = Strongly Agree

C1. Productivity: Our team consistently meets productivity targets and efficiently manages patient care workload.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

C2. Quality & Safety: Our team maintains high standards of patient care quality and prioritizes patient safety.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

C3. Team Satisfaction: I am satisfied with my job and feel valued as a member of this team.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

C4. Innovation: Our team actively participates in quality improvement initiatives and implements innovative practices.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

C5. Retention & Engagement: I intend to remain with this organization and am committed to its success.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

SECTION D: CULTURAL CONTEXT ASSESSMENT

Instructions: Rate your agreement with the following statements.

D1. Cultural Sensitivity: Our leader effectively manages our multicultural team and respects diverse cultural backgrounds and perspectives.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

D2. Gender Inclusivity: Our healthcare organization provides equal opportunities for both male and female healthcare professionals in leadership roles.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

SECTION E: VISION 2030 TRANSFORMATION CONTEXT

Instructions: Rate your agreement with the following statements about organizational transformation.

E1. Transformation Leadership: Our leader effectively guides the team through Vision 2030 changes including privatization, digitalization, and Saudization initiatives.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

E2. Change Adaptation: Our team successfully adapts to organizational changes while maintaining high performance standards.

1 ☐ | 2 ☐ | 3 ☐ | 4 ☐ | 5 ☐

OPTIONAL: ADDITIONAL COMMENTS

Please share any additional thoughts about leadership effectiveness in your healthcare organization:

Thank You!

Thank you for completing this survey. Your responses will contribute to improving healthcare leadership in Saudi Arabia during the Vision 2030 transformation.

