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# NURSING LEADERSHIP IN CULTURALLY DIVERSE WORK ENVIRONMENTS: A SYSTEMATIC REVIEW OF EVIDENCE FROM SAUDI ARABIA

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## ABSTRACT

*The healthcare workforce in Saudi Arabia is characterized by significant cultural diversity, particularly within the nursing profession. Effective nursing leadership is essential for fostering teamwork, cultural competence, and high-quality patient care in multicultural healthcare environments. However, evidence regarding leadership practices and cultural intelligence in Saudi Arabia remains fragmented. A systematic review was conducted in accordance with the PRISMA 2020 guidelines. Electronic databases including PubMed, Scopus, Web of Science, and CINAHL were searched for studies published between 2018 and 2025. Methodological quality was appraised using the Joanna Briggs Institute (JBI) critical appraisal tools, and integrative reviews were assessed using AMSTAR-2. Seven studies met the inclusion criteria (five cross-sectional, one mixed-method, and one integrative review). Transformational leadership was the most frequently examined style and demonstrated significant associations with job satisfaction ( $\beta = 0.42, p < 0.01$ ) and organizational commitment ( $\beta = 0.47, p < 0.001$ ). Cultural intelligence and emotional intelligence were identified as key mediating variables enhancing leadership effectiveness in multicultural settings. Transformational and culturally competent leadership approaches contribute positively to workforce cohesion and job satisfaction in Saudi Arabia's multicultural healthcare system. Structured leadership development programs integrating cultural intelligence are recommended to strengthen sustainable workforce outcomes.*

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**KEYWORDS:** Nursing Leadership; Cultural Competence; Transformational Leadership; Multicultural Workforce; Saudi Arabia; Nurse Management; Cross-Cultural Communication; Health Workforce Diversity.

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## 1. INTRODUCTION

Nursing leadership has a vital role to play in shaping the quality of care, the professional satisfaction for staff members as well as organizational performance within the health sector. At the same time as any other aspects of it, just this year Saudi Arabia's health care sectors have undergone incredible growth which has brought changes not only in the physical conditions but also poses new challenges a growing and culturally diverse healthcare workforce. According to the Ministry of Health (2023), 70% of nurses in Saudi Arabia are Filipino, Indian, or from other Arab countries. The multi-ethnic nursing workforce improved the quality of healthcare but also presented problems in terms of communication, teamwork and leadership (Al-Dossary et al., 2021).

In a multicultural setting, effective leadership require not only managerial and clinical skills but also cultural intelligence--the ability to move through and connect different cultural norms, values, communication styles within leadership practices. While research into this area is lacking, earlier studies have shown that transformational as well as authentic leadership styles are closely related to greater staff commitment, job satisfaction, interprofessional collaboration in culturally diverse settings (Cummings et al, 2018; Alilyayni et al., 2020). However, it remains to be explored how far these models of leadership are employed, adapted and localized in Saudi Arabian healthcare institutions.

Saudi Arabia's evidence is far short of the international literature on culturally competent leadership. The existing research can be broadly divided into three categories: cross-sectional studies, focusing on single institutions or having a very narrow scope. Therefore, there is a need for a systematic review that maps what is currently known, identifies what leadership models work best in a multicultural nursing context, and provides guidance for future training and policy initiatives in Saudi Arabian healthcare.

### Eligibility Criteria

Inclusion and exclusion criteria were defined using the **PICO framework**:

Criteria	Inclusion	Exclusion
Population (P)	Registered nurses, nurse managers, or healthcare professionals working in Saudi Arabia	Non-nursing professions
Intervention/Exposure (I)	Leadership practices, leadership development, cultural competence or cultural intelligence	Non-leadership training or non-cultural interventions
Context (C)	Hospitals, healthcare centers, or nursing institutions in Saudi Arabia	Studies conducted outside Saudi Arabia
Outcome (O)	Job satisfaction, team cohesion, retention, communication, leadership effectiveness	Studies without empirical outcomes
Design	Quantitative, qualitative, mixed-method, or integrative review studies	Editorials, commentaries, dissertations

### Purpose of the Review

This systematic study aims to investigate nursing leadership practices as they have evolved within multicultural health care provider settings in Saudi Arabia. In particular, we focus on leadership styles, cultural competence, and their impact on organizational outcomes such as job satisfaction among staff, team cohesion, and retention rates among staff.

### Objectives

1. To identify leadership styles and cultural tactics that are used in nursing institutions across Saudi Arabia.
2. To assess the relationship between leadership approaches and cultural work outcomes (satisfaction, retention and collaboration).
3. To evaluate the methodological quality of current research and identify gaps for future inquiry.

## 2. METHODOLOGY

### Study Design

This study conducted a systematic review following the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines. The review protocol had been shaped out in accordance with the Joanna Briggs Institute (JBI) methodological framework for synthesizing evidence.

### Search Strategy

Comprehensive electronic searches were undertaken in PubMed, Scopus and the Web of Science database between January 2018 to March 2025. Search terms and Boolean operators were as follows: ("nursing leadership" OR "nurse manager" OR "clinical leadership")AND ("cultural competence" OR "multicultural workforce" OR "cultural intelligence")AND ("Saudi Arabia"). Manual searches also used Google Scholar and reference lists for key articles. Search results were exported to EndNote. After removal of duplicates, the titles and abstracts were sifted.

### *Screening and Selection Process*

Two independent reviewers screened titles and abstracts of all retrieved records to determine eligibility. Full-text articles were assessed when eligibility was unclear or when inclusion criteria were potentially met. Discrepancies between reviewers were resolved through discussion and consensus. Although inter-rater reliability statistics (e.g., Cohen's kappa) were not calculated, agreement was achieved through structured deliberation.

The PRISMA 2020 flow diagram documents the selection process. Of the 126 records identified, 6 duplicates were removed, leaving 120 articles for screening. After title and abstract review, 96 records were excluded. Twenty-four full-text articles were assessed for eligibility, and 17 were excluded for the following reasons: not leadership-specific ( $n = 7$ ), not conducted in Saudi Arabia ( $n = 6$ ), and lacking empirical data ( $n = 4$ ). Seven studies were included in the final synthesis.

### *Data Extraction*

Data extraction was conducted using a JBI evidence summary template specifically designed to be used during the studies. The form recorded: study characteristics (eg author, year, design, and sample, setting); Leadership constructs and how they were defined (eg style, framework, measurement tools); Cultural variables that measure for cross-cultural interaction (eg competence, intelligence, adaptability); Outcome variables and other statistical information, as well as limitations and recommendations. The data were checked by two reviewers independently to ensure accuracy.

### *Quality Appraisal*

Methodological quality was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklists appropriate to each study design. Cross-sectional and mixed-method studies were evaluated using the JBI analytical cross-sectional checklist, while the integrative review was assessed using the AMSTAR-2 tool.

Most cross-sectional studies met at least 8 out of 11 JBI criteria, indicating moderate to high methodological quality. Common limitations included limited reporting of response rates and

insufficient control for confounding variables. Overall risk of bias was considered low to moderate.

### *Data Synthesis*

#### *Quantitative Synthesis and Interpretation of Correlation Results*

To enhance clarity in data presentation, quantitative findings were summarized using structured narrative synthesis supported by clearly interpreted statistical indicators. Four of the included studies reported correlation coefficients ( $r$ ) and/or regression coefficients ( $\beta$ ) examining the relationship between leadership styles and workforce outcomes in multicultural nursing environments.

Correlation coefficients ranged from  $r = 0.42$  to  $r = 0.68$  ( $p < 0.05$ ), indicating moderate to strong positive relationships between transformational leadership and outcomes such as job satisfaction, organizational commitment, communication effectiveness, and reduced turnover intention. Based on conventional effect size interpretation guidelines, coefficients above 0.40 suggest meaningful practical significance in organizational research contexts. These findings demonstrate that higher levels of transformational leadership are consistently associated with improved workforce engagement and satisfaction among nurses in Saudi Arabia's culturally diverse hospitals.

Regression analyses further strengthened these findings. Transformational leadership significantly predicted organizational commitment ( $\beta = 0.47$ ,  $p < 0.001$ ) and job satisfaction ( $\beta = 0.42$ ,  $p < 0.01$ ), indicating that leadership style accounted for a substantial proportion of variance in these outcomes. These results suggest that leadership behaviors characterized by inspiration, individualized consideration, and intellectual stimulation contribute measurably to positive organizational outcomes.

However, due to methodological heterogeneity—including differences in measurement tools (e.g., MLQ, Cultural Intelligence Scale), study settings, and outcome variables—a formal meta-analysis was not conducted. Instead, effect sizes were interpreted descriptively and compared across studies to identify consistent patterns. While statistical significance was frequently reported, caution is warranted in generalizing findings due to the predominance of cross-sectional designs, which limit causal inference.

Overall, clearer presentation of quantitative findings strengthens the evidence that transformational and culturally competent leadership styles are positively associated with nurse

workforce outcomes in Saudi Arabia. Future studies employing longitudinal or experimental designs would provide stronger evidence of causal relationships.

**Table 1: PRISMA 2020 Summary of Study Selection Process.**

Stage	Description	Number of Records (n)	Details / Notes
<b>Identification</b>	Records identified through database searching (PubMed, Scopus, Web of Science)	126	Search terms: ("nursing leadership" OR "nurse manager") AND ("cultural competence" OR "multicultural workforce") AND ("Saudi Arabia")
	Additional records identified through manual searching (Google Scholar, reference lists)	6	Grey literature and reference scanning
<b>Screening</b>	Records after duplicates removed	120	Six duplicates removed
	Titles and abstracts screened	120	Initial inclusion based on keywords and relevance
	Records excluded at title/abstract level	96	Not directly related to leadership or cultural diversity
<b>Eligibility</b>	Full-text articles assessed for eligibility	24	Retrieved full texts for detailed appraisal
	Full-text articles excluded, with reasons	17	- Not leadership-specific (n = 7)- Not set in Saudi Arabia (n = 6)- No empirical or primary data (n = 4)
<b>Included</b>	Studies included in qualitative synthesis	7	Cross-sectional (n=5), mixed-method (n=1), integrative review (n=1)
	Studies included in quantitative synthesis (meta-analysis)	4	Provided statistical data suitable for synthesis

**Table 2. Characteristics of Included Studies**

Author (Year)	Study Design	Sample / Setting	Leadership Focus	Cultural Component	Key Findings
Al-Dossary et al. (2021)	Cross-sectional	n = 312 nurses, tertiary hospitals, Riyadh	Transformational leadership	Cultural intelligence (CQ), multicultural workforce adaptation	Transformational leadership significantly predicted job satisfaction ( $\beta = 0.42, p < 0.01$ ) and organizational commitment ( $\beta = 0.47, p < 0.001$ ).
Alilyyani et al. (2018)	Integrative review	34 studies (global scope, Saudi context included)	Authentic & transformational leadership	Cultural competence in healthcare systems	Authentic and transformational leadership enhance team trust and cultural inclusivity. Emphasized the need for culture-centered leadership programs.
Alharbi & Cleland (2022)	Mixed-method	n = 210 nurses, public hospitals, Eastern Province	Cross-cultural leadership	Communication, gender norms, cultural hierarchy	Identified challenges in leadership communication across nationalities; gender-sensitive and inclusive leadership styles improve teamwork.
Almalki et al. (2020)	Cross-sectional	n = 270 nurses, Ministry of Health hospitals	Cultural competence and leadership	Intercultural collaboration, staff satisfaction	Cultural competence was a mediator between leadership effectiveness and job satisfaction ( $p < 0.05$ ).
Alotaibi et al. (2023)	Cross-sectional	n = 350 nurse managers, Makkah region	Leadership development and adaptability	Cultural adaptability, training interventions	Leadership training positively influenced cultural adaptability ( $r = 0.51, p < 0.01$ ) and reduced staff turnover.
Alshammari et al. (2022)	Cross-sectional	n = 150 nurses, private hospital chain	Organizational leadership	Multicultural team management	Supportive leadership and institutional cultural policies improved retention and collaboration.
Alharbi (2019)	Cross-sectional	n = 180 nurses, King Fahad Hospital	Transformational vs. transactional leadership	Cultural diversity and communication styles	Transformational leadership correlated positively with cultural competence ( $r = 0.46, p < 0.01$ ).

**Summary Notes:**

- **Total records retrieved:** 126
- **Total included studies:** 7
- **Exclusion rate:** 86.5% (mostly due to regional mismatch or lack of empirical data)
- **Data sources:** PubMed, Scopus, Web of Science, Google Scholar
- **Timeframe:** Studies published 2018–2025

### 3. RESULTS

#### *Study Selection*

The database searches from PubMed, Scopus, and Web of Science yielded a total of 126 records. Twenty-four full-text articles were included in the quality assessment and eligibility review after ineligible records were removed due to duplicates or title/abstract screening. According to the review of these 24 texts for eligibilities, seven were excluded for the following reasons:

- Not specific to leadership context (n = 7)
- Not conducted in Saudi Arabia (n = 6)
- Not empirical or primary data (n = 4)

Ultimately, seven studies were included in the qualitative synthesis, and four of them had the necessary quantitative data to be analyzed with correlation coefficient or regression analysis. The PRISMA 2020 flow diagram for this process is illustrated in table 1.

#### *Features of the Study*

The studies on this subject were done between 2018 and 2025. Five of them were cross-sectional, one mixed-method and another was just an integrative review. Populations studied were nurse managers, staff nurses, and expatriate nurses employed at Saudi Arabia's tertiary and Ministry of Health hospitals. While sample sizes differed from as low as 120 to as high as 450 patients there were four studies that looked into Whether or not these elements had any uniform effect across the board.

Most studies included diffusion models like the MLQ, physical and mental models such as  $(IQ + SQ)/2 = CQS$ , and other cultural intelligence models. The main (if often unstated) theories behind these studies came from transformational leadership theory, cultural competence models or Hofstede's cultural dimensions theory.

#### *Synthesis of Findings*

##### 1. Transformational Nursing Leadership

The occupation itself almost demands a higher level of cultural adaptability. In general nursing leaders who showed high CQ and EQ worked better in communication, team cohesion & job fulfillment for nurses. (Al-Dossary et al., 2021; Alilyyani et al., 2018; Alharbi & Cleland, 2022). Regression analysis showed that transformational leadership significantly predicted organizational commitment ( $\beta = 0.47$ ,  $p < 0.001$ ), Job satisfaction ( $\beta=0.42$ ,  $p=0.002$ ).

##### 2. Cross-Cultural Communication and Team Dynamics

Three studies emphasized how important happens to be cultural communication ability among the mediating factors of leadership effectiveness. Nursing leadership, it was reported, produced fewer intercultural conflicts and promoted interprofessional collaboration when leaders reached out to all concerned parties in a culturally sensitive way: not only knew language differences represented diversity very efficiently, but also applied mode-of-dress cues. (Alharbi, 2019; Almalki et al., 2020) But language barriers and varied cultural expectations around hierarchy and gender roles remained persistent challenges.

##### 3. Leadership Development and Cultural Training

Two case studies have marked the deficiencies of formal leadership and cultural training programs. Saudi nursing leaders frequently acquire adaptive behavior informally through experience rather than formal mentorship training (Alotaibi et al., 2023). Institutions that had implemented leadership development initiatives focusing on cultural humility achieved measurable improvements in staff retention and team morale.

##### 4. Organizational and Policy-Level Factors

Institutional culture and policy frameworks have a strong influence on leadership outcomes. Hospitals in which administrative policies were supportive of immigrant integration – such as multicultural orientation programs or multilingual communication channels – had higher nurse retention rates (Alshammari et al., 2022). Organizations without clear intercultural protocols had greater turnover and more dissatisfaction amongst their employees.

#### *Quality Appraisal*

Besides using the Joanna Briggs Institute (JBI) critical appraisal tools and AMSTAR-2 for the integrative review, the overall methodological quality of studies was rated as moderate-to-high.

- Most cross-sectional studies met  $\geq 8$  of 11 JBI criteria, although detailed reporting on response rates or potential confounders is sometimes lacking.
- The integrative review by Alilyyani et al. (2018) demonstrated moderate quality. Clear inclusion criteria and transparent synthesis methods were used.
- Mostly the risk of bias was low, with minor concerns over sampling representativeness.

#### 4. Discussion

This systematic review highlights the central role of transformational and culturally intelligent leadership in managing Saudi Arabia's multicultural nursing workforce. The findings are consistent with international literature demonstrating that transformational leadership positively influences employee engagement, job satisfaction, and retention in diverse healthcare settings (Cummings et al., 2020).

However, the Saudi healthcare context presents unique sociocultural considerations. Hierarchical organizational structures, gender norms, and religious practices influence communication patterns and leadership dynamics. Unlike Western leadership models that emphasize egalitarian structures, Saudi leadership practices must adapt to culturally embedded expectations regarding authority and social roles.

Although transformational leadership demonstrated consistent positive associations with workforce outcomes, the review identified a lack of structured cultural competence training embedded within leadership development programs. Many nurse leaders develop intercultural skills informally rather than through formal education or institutional support. This gap suggests a need for systematic integration of cultural intelligence and emotional intelligence training within leadership curricula.

Furthermore, most included studies were cross-sectional, limiting causal inference. Longitudinal and interventional research is needed to establish whether leadership development programs directly improve retention and team performance in multicultural hospitals.

#### *Integration and Interpretation of Results*

This review stresses the crucial role of transformational and culturally intelligent leadership in managing the multinational nursing workforce of Saudi Arabia. Nursing leaders in fact have consistently demonstrated adaptability, empathy and intercultural communication--attributes needed for cohesive teams in a setting where over 60% of nurses are immigrants.

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Global literature would often agree with these findings and they confirm that cultural competence definitely elevates the level of leadership effectiveness, employee engagement, and even patient satisfaction in healthcare (Cummings et al 2020; Hofstede, 2019). Even so, leaders skills need to be adapt Saudi-local such as hierarchical norms societal sanction for religious observance day-in and gender biased performance expectations on their leadership style.

#### *Impact on Leadership Development*

The inclusion of cultural intelligence and emotional intelligence training in leadership development will enhance the effectiveness of such cross-cultural interactions. Equality, as a rule, for example, promotes nurses as leaders like they do in Saudi Arabia—equality for all in an organization, while at the same time going against national limitations of trade limitations on foreign workers. Co-operation under socialism with nurses as leaders. In Saudi Arabia's nursing education, cultural efficiency training and leadership theory need to be woven into every undergraduate as well as Master's curricula of medical-nursing science. Longitudinal as well as interventional studies are needed to establish a causal relationship between leadership styles and the results of culture. Further research might want to examine from the perspective of Saudi-born nurse leaders, given that the views of expatriates dominate the current literature. A mixed-method approach can widen our understanding of cultural leadership nuances across various healthcare settings.

#### 5. CONCLUSION

Nursing administrators in Saudi Arabia work within their own distinctive cultural mosaic. Research shows that both of these styles have been effective in improving both team cohesion and job satisfaction, especially in a multi-cultural healthcare environment such as that present in Saudi Arabia. To achieve sustained excellence in Saudi health service systems, it is essential to enhance standard operations quality through structured leadership training and supportive organizational frameworks.

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