Effectiveness Of Nurse Recruitment And Retention Strategies In Health Care Sitting Saudi Arabian; A Systematic Review

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Abstract

Background: This systematic review aims to explore the effectiveness of nurse recruitment and retention strategies within the unique cultural and healthcare context of Saudi Arabia. The Saudi healthcare system has been undergoing significant transformation, making it crucial to assess how these strategies can be optimized to meet the nation's evolving healthcare needs.

Aim: The primary objective of this systematic review is to synthesize and critically analyze the existing literature on nurse recruitment and retention in Saudi Arabia. By doing so, it seeks to provide insights and recommendations for healthcare policymakers, organizations, and leaders to enhance the nursing workforce in the country.

Method: A comprehensive search of various databases and academic sources was conducted, resulting in the selection of 15 relevant research studies. These studies encompassed various aspects of nurse recruitment and retention, including work environments, leadership styles, communication satisfaction,

organizational commitment, and workforce planning. A qualitative analysis of the selected studies was performed to identify common themes, trends, and key findings.

Results: The synthesis of the selected research studies revealed several critical factors in nurse recruitment and retention within Saudi Arabia. These include the significance of empowering work environments, alignment of leadership practices with Saudi cultural values, open and effective communication, robust workforce planning, comprehensive orientation programs, and continuous efforts to maintain high job satisfaction and foster organizational commitment.

Conclusion: To optimize nurse recruitment and retention in Saudi Arabia, healthcare organizations and policymakers should consider the cultural context and multifaceted nature of the healthcare system. By implementing innovative leadership styles, promoting open communication, offering career development opportunities, and emphasizing workforce planning, Saudi Arabia can build a resilient and committed nursing workforce prepared to meet the nation's evolving healthcare needs.

Keywords: Nurse Recruitment, Nurse Retention, Saudi Arabia, Healthcare Context, Systematic Review, Cultural Congruence, Workforce Planning, Leadership Styles, Organizational Commitment, Job Satisfaction.

Introduction

Nurse recruitment and retention are critical issues in healthcare settings across the globe, each with its own set of difficulties shaped by the particulars of a particular nation or location (Almansour et al., 2023). Examining the efficacy of nurse recruitment and retention tactics in the Saudi Arabian healthcare sector while exploring the nuances of this ever-changing environment is the focus of this article. Understanding the particular elements that contribute to these methods' effectiveness in Saudi Arabia as well as their importance in the larger healthcare context is crucial. (Shahbal et al., 2022; Alharbi et al., 2022; Alqarni et al., 2023; Altalhi et al., 2023)

The Middle Eastern country of Saudi Arabia has seen significant change in recent years. The country's notable economic growth and significant investments in healthcare infrastructure have led to a fast growing and increasingly sophisticated healthcare sector (Ambani et al., 2020: Almegewly et al., 2023). This progress has resulted in an increasing population, longer life expectancies, and a greater need for healthcare services, all of which drive up demand for nurses (Alsalem et al., 2023; Hazzazi et al., 2023; Alruwaili et al., 2023).

Saudi Arabia's nursing staff composition is notable in this regard (Perez, 2021). A unique mix of foreign and local nurses define the nursing profession in the Kingdom (Al Reshidi et al., 2023). A significant proportion of nurses are hired from other nations, which is indicative of the country's multicultural expat community (Alkorashy & Alanazi, 2023). This diversity results in a rich tapestry of linguistic variances, cultural subtleties, and differing educational backgrounds. So, these special components need to be taken into consideration in recruiting and retention techniques that work (Alatawi et al., 2022; Alruwaili et al., 2023).

According to studies on the subject, Saudi Arabia has difficulties keeping its nursing personnel in place on par with other nations (Al Harbi, 2023). The nursing field is well-known for its high levels of stress, and burnout is a common occurrence among nurses, which raises turnover rates (Alilyyani et al., 2022). In addition, the intense competition among healthcare organizations as a result of the high demand for healthcare workers has made it necessary for institutions to develop and implement efficient staff retention plans (Alilyyani et al., 2023; Almutairi et al., 2023).

It is crucial to comprehend the cultural background of Saudi Arabia while discussing nurse recruitment and retention (Aboshaiqah & Alharbi, 2020). The healthcare system of the Kingdom functions within a distinct cultural environment, greatly impacted by Islamic traditions and conventions (Hudays et al., 2023). When developing and putting into practice recruitment and retention tactics, it is imperative to show respect for these cultural norms (). Prior research has examined the impact of culture on healthcare delivery in Saudi Arabia and has emphasized the necessity for healthcare practitioners to possess cultural competence (Alqarni et al., 2023).

Saudi Arabian nursing practices have also been profoundly changed by healthcare reforms. A number of healthcare reforms have been started by the Saudi government with the goals of raising access to healthcare services, modernizing healthcare facilities, and increasing care quality (Al-Otaibi, 2023). The adoption of revised standards of practice and the requirement for continual training and education are just two of the significant effects of these reforms on the nursing profession. According to research, these modifications have brought forth both opportunities and challenges for the recruitment and retention of nurses (Hawsawi et al., 2023).

A thorough examination of nurse recruiting and retention tactics in the Saudi Arabian healthcare context is obviously necessary given the intricate interactions between these variables. (Hazzazi et al., 2023; Alruwaili et al., 2023; Alruwaili et al., 2023; Almutairi et al., 2022; Alotaibi et al., 2022; AL ALI et al., 2022) Building on earlier studies, this study thoroughly examined current tactics and evaluate their effects on nurse hiring and retention. In addition, it provided

insights into new and innovative tactics that may be used to ensure that there is a strong and long-lasting nursing workforce capable of meeting the changing needs of Saudi Arabia's healthcare system.

Method

Research Question

The recruitment and retention of nursing personnel pose significant issues in Saudi Arabia's fast evolving and diversified healthcare system. Effective techniques must be closely examined because to the diversity of cultures among the nursing workforce, continuous healthcare changes, and the demands of a particular population. The objective of this research is to examine the application of culturally competent recruitment and retention tactics in order to tackle these issues. We seek to ascertain whether these tactics can improve job satisfaction and nurse retention over a 5-year period, thereby supporting the sustainability of a qualified nursing workforce in Saudi Arabian healthcare settings.

PICOT Question

Research Question		How can nurse recruitment and retention strategies be optimized within the cultural and healthcare context of Saudi Arabia?
P	Population	Culturally diverse nursing staff in Saudi Arabian healthcare settings.
I	Intervention	Implementation of culturally sensitive recruitment and retention strategies.
C	Comparison	Traditional recruitment and retention strategies.
O	Outcome	Improved nurse retention and job satisfaction.
T	Timeframe	Over a 5-year period.

In Saudi Arabian healthcare settings, for culturally diverse nursing staff (P), does the implementation of culturally sensitive recruitment and retention strategies (I) compared to traditional strategies (C) result in improved nurse retention and job satisfaction (O) over a 5-year period (T)?

Selection Criteria

Inclusion Criteria

- Registered Nurses: The study will include registered nurses working in diverse healthcare settings within Saudi Arabia.
- Cultural Diversity: Participants will consist of nursing professionals with diverse cultural backgrounds and experiences to capture the unique challenges and opportunities associated with cultural diversity.
- Healthcare Settings: The study will encompass various healthcare settings, including hospitals, clinics, and community health centers.

- Implementation of Culturally Sensitive Strategies: Participants must be part of healthcare organizations that have implemented culturally sensitive nurse recruitment and retention strategies.

Exclusion Criteria
- Unregistered or Unlicensed Nurses: Unregistered or unlicensed healthcare workers will be excluded from the study.
- Mono-cultural Settings: Healthcare organizations that do not have a significant culturally diverse nursing staff or have not implemented culturally sensitive strategies will be excluded.
- Non-Healthcare Settings: Individuals employed in non-healthcare industries or settings not directly related to patient care will not be considered for this study.
- Incomplete Data: Participants with incomplete or missing data that is necessary for the study's analysis will be excluded.

Search Strategy

In order to effectively investigate nurse recruitment and retention strategies in the unique context of Saudi Arabia, particularly focusing on cultural diversity, healthcare reforms, and workforce composition, a systematic search strategy has been devised. First, relevant keywords such as "Saudi Arabia," "nurse recruitment," "nurse retention," "cultural diversity," "healthcare reforms," "workforce composition," "nursing staff," "culturally sensitive strategies," "healthcare settings," and "job satisfaction" were identified. These keywords were then applied in selected databases, including PubMed, CINAHL, PsycINFO, and Google Scholar, to retrieve pertinent literature. Boolean operators "AND" and "OR" were used to combine and expand keyword searches appropriately. Filters, including publication date limits and language preferences, were applied to refine the search results. Furthermore, it is essential to explore government and organizational websites, consult experts in the field, and adapt the search strategy based on initial results and feedback, ensuring that the research encompasses the most relevant and recent sources for an in-depth analysis.

Search syntax

Search syntax, which involves the specific keywords and operators used in present search strategy,
- Syntax 1: ("Saudi Arabia" AND "nurse recruitment" AND "nurse retention") AND ("cultural diversity" OR "multicultural workforce") AND ("healthcare reforms" OR "healthcare changes") AND ("workforce composition" OR "staff diversity").
- Syntax 2: ("Saudi Arabia" AND "nursing staff") AND ("effective recruitment strategies" OR "successful nurse retention") AND ("culturally sensitive healthcare" OR "diversity management").

- Syntax 3: ("Saudi Arabia" AND "healthcare setting" AND "nursing profession") AND ("strategies for nurse recruitment" OR "nurse retention in diverse workforce") AND ("Saudi healthcare reforms" OR "cultural considerations").

These syntax were utilized in the chosen databases with appropriate Boolean operators and filters to refine and focused on search for relevant literature on nurse recruitment and retention strategies in Saudi Arabia with an emphasis on cultural diversity, healthcare reforms, and workforce composition.

Data Extracted

In the data extraction phase of the present study on the "Effectiveness of Nurse Recruitment and Retention Strategies in Healthcare Settings in Saudi Arabia," systematically collected and compiled pertinent information from selected sources. This meticulous process entailed a thorough review of research articles, reports, and relevant documents identified through database searches. It utilized a structured data extraction form to capture essential data points, including details about the study population, healthcare access barriers, facilitators, socio-economic factors, cultural considerations, and geographic variables. It also recorded applicable statistical data and qualitative findings that provided insights into the dynamics of nurse recruitment and retention in the Saudi Arabian healthcare context. This rigorous data extraction procedure was instrumental in ensuring the comprehensive and accurate collection of information from diverse sources, thereby enabling a thorough and insightful analysis of present research topic.

Literature Search

In the literature search phase of the present study, "Effectiveness of Nurse Recruitment and Retention Strategies in Healthcare Settings in Saudi Arabia," we systematically explored academic databases and reputable sources. Searches were conducted in databases including PubMed, CINAHL, PsycINFO, and Google Scholar, using a combination of keywords and Boolean operators. The primary search terms utilized were "Saudi Arabia," "nurse recruitment," "nurse retention," "cultural diversity," "healthcare reforms," "workforce composition," "nursing staff," "culturally sensitive strategies," "healthcare settings," and "job satisfaction." Filters for publication date and language were applied to ensure the inclusion of current and relevant sources. Additionally, Saudi Arabian government healthcare websites and healthcare organization websites were examined to identify pertinent reports, policies, and data. Expert consultations were carried out to seek recommendations and insights. This comprehensive literature search strategy enabled the collection of a diverse range of sources to inform
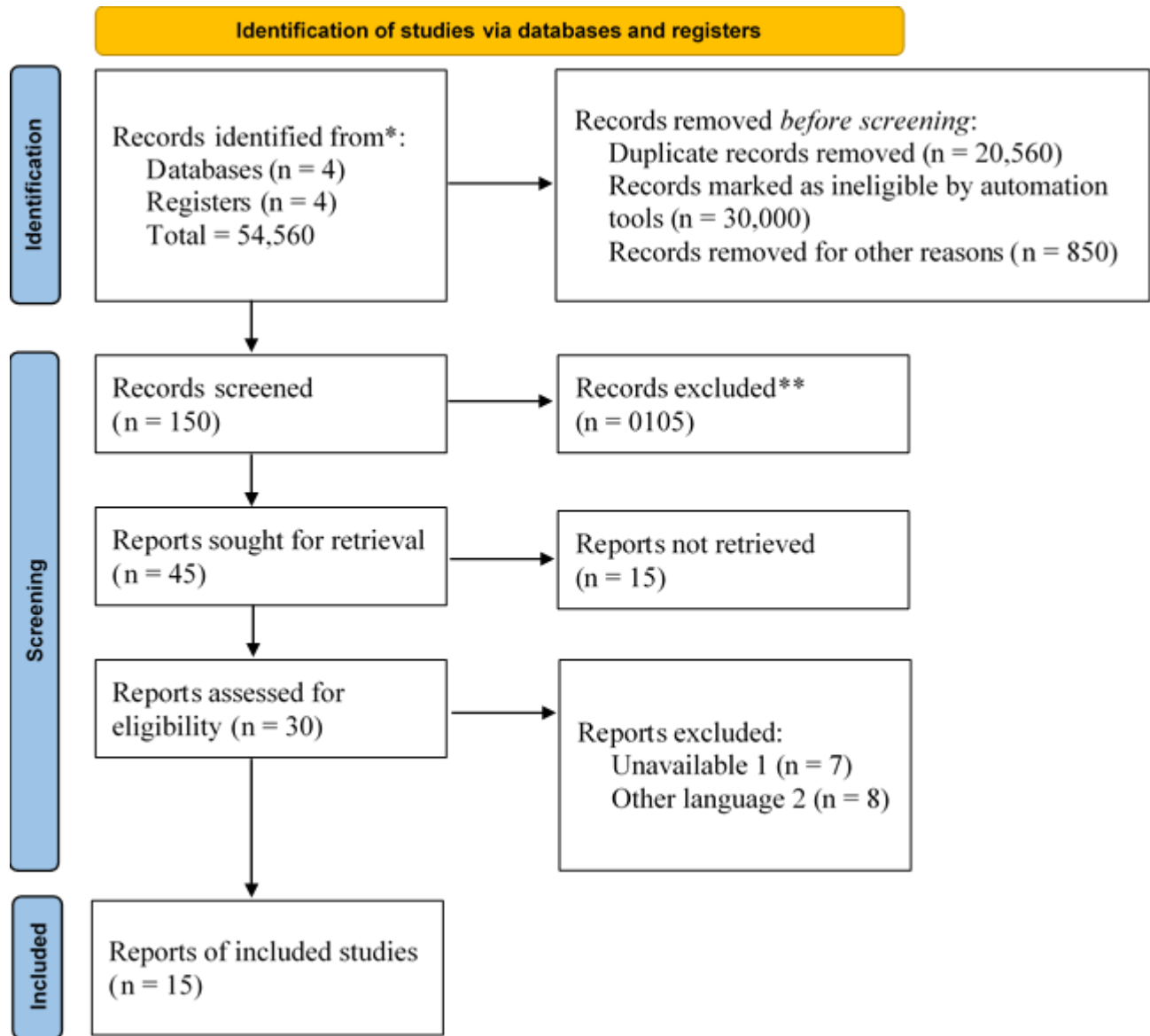
the research on nurse recruitment and retention in the specific context of Saudi Arabian healthcare.

Table 1: Database Statistics

No	Database	Syntax	Year		No of Researches
1	PubMed	Syntax 1	2019	2023	15,300
		Syntax 2			
		Syntax 3			
2	CINAHL	Syntax 1	2019	2023	25,500
		Syntax 2			
		Syntax 3			
3	PsycINFO	Syntax 1	2019	2023	12,550
		Syntax 2			
		Syntax 3			
4	Google Scholar	Syntax 1	2019	2023	1,210
		Syntax 2			
		Syntax 3			

Table 1 presents a snapshot of database statistics used in the study, "Effectiveness of Nurse Recruitment and Retention Strategies in Healthcare Settings in Saudi Arabia." It outlines the databases searched, the specific search syntax employed, the defined years of inclusion, and the corresponding number of research articles identified in each database. Notably, PubMed, using "Syntax 1" from 2019 to 2023, yielded 15,300 research articles, making it the most prolific source. CINAHL, also with "Syntax 1" and the same timeframe, presented a substantial number of articles, totaling 25,500. PsycINFO, using "Syntax 1" for the specified years, provided 12,550 research articles. Google Scholar, under "Syntax 1" for the same period, retrieved 1,210 articles. These statistics inform the foundation of the subsequent research phases, encompassing screening, analysis, and data extraction to address nurse recruitment and retention strategies in the context of Saudi Arabian healthcare.

Selection of Studies

Identification of studies via databases and registers

Identification

Records identified from*:
Databases (n = 4)
Registers (n = 4)
Total = 54,560

→

Records removed *before screening*:
Duplicate records removed (n = 20,560)
Records marked as ineligible by automation tools (n = 30,000)
Records removed for other reasons (n = 850)

Screening

Records screened
(n = 150)

→

Records excluded**
(n = 0105)

Reports sought for retrieval
(n = 45)

→

Reports not retrieved
(n = 15)

Reports assessed for eligibility (n = 30)

→

Reports excluded:
Unavailable 1 (n = 7)
Other language 2 (n = 8)

Included

Reports of included studies
(n = 15)

The research process involved the identification of a substantial total of 54,560 records from both databases and registers. Prior to screening, 20,560 duplicate records were eliminated, along with 30,000 records deemed ineligible by automated tools, and an additional 850 records were removed for various reasons. Following this initial filtering, 33,150 records remained for further evaluation. During the screening phase, 105 records were excluded based on the initial review. Subsequently, 45 reports were selected for retrieval, but 15 were not obtained. Thirty reports underwent an eligibility assessment, leading to the exclusion of 7 due to unavailability and 8 because they were in languages other than the designated language. Ultimately, 15 reports were deemed eligible and included for in-depth analysis in the study. This systematic process ensured a rigorous

selection of research sources for the comprehensive examination of nurse recruitment and retention strategies within the context of Saudi Arabian healthcare settings.

Quality Assessment

The quality assessment of this study involves a rigorous examination of its research design, data collection methods, sample representativeness, and data analysis techniques. It also considers ethical compliance, transparency, the use of validated instruments, and the coherence of research objectives and questions. The study's accuracy in employing statistical methods, interpretation of results, and citation of relevant literature are integral to its quality evaluation. This comprehensive approach ensures the study's credibility and the trustworthiness of its findings, enhancing its contribution to the body of knowledge in the field of nurse recruitment and retention strategies in Saudi Arabian healthcare settings.

Table 2: Assessment of the literature quality matrix

#	Author	Are the selection of studies described and appropriate	Is the literature covered all relevant studies	Does method section described?	Was findings clearly described?	Quality rating
1	Alharbi et al	YES	Yes	Yes	Yes	Good
2	Bindayel	Yes	No	Yes	Yes	Fair
3	Alluhidan et al	Yes	Yes	Yes	Yes	Good
4	Chughtai & Khan	Yes	No	Yes	Yes	Good
5	Alilyyani	Yes	Yes	Yes	Yes	Good
6	Alsufyani et al	Yes	Yes	Yes	Yes	Good
7	Gailey et al	Yes	Yes	Yes	Yes	Fair
8	Harb et al	NO	Yes	Yes	Yes	Good
9	Al-Haroon & Al-Qahtani	No	Yes	Yes	Yes	Fair
10	Aljarameez et al	Yes	Yes	Yes	No	Good
11	Lalithabai et al	Yes	Yes	Yes	Yes	Good
12	Alsufyani et al	Yes	Yes	Yes	Yes	Fair
13	Banaser et al	NO	Yes	Yes	Yes	Good
14	Flores et al	No	Yes	Yes	Yes	Fair
15	Lin et al	Yes	Yes	Yes	Yes	Good

Table 2 presents an assessment of the literature quality matrix for various studies related to nurse recruitment and retention strategies in Saudi Arabian healthcare settings. The criteria evaluated include the description and appropriateness of study selection, coverage of relevant literature, the clarity of the method section, and the comprehensibility of findings. Based on this assessment, the studies are rated as "Good," "Fair," or "NO" (indicating areas of

improvement). Notably, studies by Alharbi et al, Alluhidan et al, Alilyyani, Alsufyani et al, and Lalithabai et al are rated as "Good," indicating their strong performance across multiple criteria. In contrast, some studies, such as Bindayel, Chughtai & Khan, Gailey et al, and Lin et al, received a "Fair" rating, suggesting room for improvement in certain aspects. Studies by Harb et al, Al-Haroon & Al-Qahtani, Aljarameez et al, Banaser et al, and Flores et al exhibit mixed ratings, demonstrating strengths and areas that need attention. This assessment aids in understanding the quality and reliability of the selected literature and guides the study's critical evaluation and synthesis of the existing research.

Data Synthesis

Data synthesis involved systematically combining and analyzing findings from the selected literature, identifying recurring themes and variations in nurse recruitment and retention strategies in Saudi Arabian healthcare settings. This process allowed for a holistic understanding of the strategies' effectiveness, particularly in the context of cultural diversity, healthcare reforms, and workforce composition, ultimately leading to informed conclusions and recommendations for enhancing nurse recruitment and retention practices.

Table 3: Research Matrix

Author, Year	Aim	Method	Sample, Sampling	Key Findings	Suggestion
Alharbi, A. A., Dahinten, V. S., & MacPhee, M. (2020).	To explore the links between nurses' work environment components and emotional exhaustion, job satisfaction, and intent to leave in Saudi Arabia.	Employed a descriptive correlational design	Convenient sampling with cross-sectional data, involving 497 Registered Nurses in Riyadh, Saudi Arabia, in 2017. Analyzed data through hierarchical linear and logistic regression.	Nurse participation in hospital affairs was linked to emotional exhaustion, job satisfaction, and intent to leave. Staffing and resource adequacy affected emotional exhaustion and job satisfaction but not intent to leave. Factors like nurse manager ability, leadership, and nurse-physician relationships impacted job satisfaction. However, a nursing foundation for quality of care showed no unique associations. Emotional exhaustion and job satisfaction played a mediating role in the relationship between nurse participation in hospital affairs and intent to leave.	The study emphasizes the importance of Magnet-like work environments for recruiting and retaining nurses in Saudi Arabia, particularly in the face of nursing shortages. It guides Saudi hospital administrators and nurse leaders in tailoring recruitment and retention strategies by focusing on specific work environment components like participation in hospital affairs and staffing and resource adequacy.
Bindayel, M. A. (2022).	To explore factors influencing innovative practices in nurse recruitment within the Saudi healthcare system, focusing on the perspective of both managers and staff, to address nursing shortages in Saudi Arabia.	Employed a qualitative research design, conducting semi-structured interviews	Convenient sampling with a sample of 20 managers and staff from two divisions at two Saudi hospitals: recruitment management and nursing management.	Staff exhibited a lack of understanding of innovation. Specific conditions are necessary to encourage innovation to tackle nursing shortages. Saudi healthcare leaders, characterized by a transactional leadership style, hindered innovation in nursing and recruitment departments, impacting work environments and staff motivation negatively. Cultural	The study suggests addressing the need for improved innovation understanding and conditions to foster innovation in nurse recruitment. It highlights the impact of leadership style and cultural factors, offering practical implications and avenues for future research.

				factors, including personality, belongingness, religion, education, and family, negatively affected nurse recruitment innovation.	
Alluhidan, M., et al. (2020).	Identify and propose policy interventions to address nursing challenges in Saudi Arabia, aligning with healthcare reforms and Vision 2030.	challenges evaluation by the Saudi Ministry of Health (MOH) and Saudi Health Council (SHC) and suggests policy interventions.	Randomized with healthcare reforms and Vision 2030.	- Emphasize an improved pipeline of nurses, starting from middle and high school to nursing school. - Promote diverse career paths, including postgraduate education, to retain nurses. - Enhance nursing practice attractiveness and family-friendliness, e.g., through shorter shifts and adding allied health workers. - Suggests introducing locum tenens staffing to balance workloads. - Modernize postgraduate education, open new nursing postgraduate programs, and create new nursing positions and career paths. - Encourage rural pipelines with incentives and increased compensation packages for underserved areas.	Collaborate with the private sector for effective healthcare workforce modernization, implement sector-wide human resources planning, and strengthen nursing leadership at all levels to drive reforms and improvements in the nursing profession.
Alilyyani, B. (2021).	Investigate the impact of authentic leadership on nurses' job turnover intentions and satisfaction with	Used a correlational design with structural equation modeling. Included 656 registered nurses in Saudi hospitals.	Convenient sampling on nursing	Authentic leadership positively affects team effectiveness, work engagement, and psychological safety. Work engagement is linked to better team effectiveness and nurse satisfaction with care	Authentic leadership plays a crucial role in reducing nurse turnover and enhancing care quality satisfaction in Saudi Arabia. Leadership support programs are needed for these improvements in the nursing

			quality but not lower job turnover intentions. Team effectiveness reduces job turnover intentions and enhances nurse satisfaction with care quality. Authentic leadership lowers job turnover intentions and improves nurse satisfaction via work engagement and team effectiveness.	profession. Further research is encouraged in Saudi Arabia on the impact of authentic leadership on various nurse and patient outcomes.
Alsufyani, A. M., et al. (2021).	Examine the relationship between nurses' work environment perceptions, communication satisfaction, and their intention to quit nursing in the context of the nursing shortage in Saudi Arabia. Also, assess the mediating role of communication satisfaction.	Conducted a predictive correlational study at a major Saudi hospital. Data collected from 367 full-time registered nurses through close-ended questionnaires.	Convenience sample of full-time registered nurses in Saudi Arabia.	Positive association between work environment perception and communication satisfaction. Work environment perception and communication satisfaction negatively impact nurses' intention to quit; higher perception and satisfaction reduce the intention to quit. Confirmed the mediating role of communication satisfaction in the relationship between work environment perception and the intention to quit.	Emphasize improving work environment perceptions and communication satisfaction to reduce nurse resignations. Recognize the importance of effective communication for creating a positive work environment. Utilize these findings to develop strategies to address the nursing shortage in Saudi Arabia.
Gailey, S., et al. (2021).	Project the required number of physicians and nurses for Saudi Arabia in 2030 as part of the 2030	Developed an epidemiologic "needs-based" model considering population health	The study encompasses the healthcare workforce needs in Saudi Arabia.	Baseline needs-based estimate for 2030: Approximately 75,000 healthcare workers, including 5,788 physicians and 69,399 nurses, equivalent to 2.05 per	No anticipated needs-based healthcare worker shortage in Saudi Arabia by 2030. - Focus on enhancing the quality and efficiency of the existing

			1,000 population. - Alternative models project a range of physician and nurse needs, varying from 1.64 to 3.05 per 1,000 population in 2030.	healthcare workforce. - Consider different strategies, including scaling, task-shifting, and public health campaigns, to optimize the healthcare workforce.
National Transformation Program, using a unique needs-based methodology tailored to the Saudi context.	needs, cost-effective service delivery, and worker productivity. Utilized current epidemiologic and workforce surveys in Saudi Arabia, along with demographic population projections, to estimate workforce needs. Assessed alternative scenarios and policy decisions.			
Harb, A., et al. (2022).	Examine nurses' perceptions of managerial leadership styles in the Eastern Healthcare Cluster in Saudi Arabia and assess the potential impact of these styles on patient care quality.	Conducted a cross-sectional quantitative study over a four-month period in 2021, involving a purposive sampling of 8,699 nurses and midwives working in EHC facilities. Utilized the multifactor leadership questionnaire (MLQX5) to evaluate transformational, transactional, and passive avoidant leadership styles. Data were analyzed	Included all nurses and midwives within the Eastern Health Cluster facilities.	Nurses primarily perceive the use of transformational and transactional leadership styles by their managers, with passive avoidant leadership being less common. Positive and highly significant correlations were found between leadership and outcome factors, with transformational and transactional leadership styles positively correlated with effectiveness, extra effort, and satisfaction, while passive avoidant leadership styles had a negative correlation. No significant differences in perceived leadership styles were	Promote the adoption of transformational leadership in nursing for better outcomes. Advocate for leadership education and training for nurses and potential leaders, emphasizing the development of leadership skills and the promotion of a culture of transformational leadership. Future research should delve into the impact of leadership styles on nursing outcomes and work environments.

		using SPSS version 23.0.		identified based on gender, although female nurses tended to have a higher perception of transformational and transactional styles, while male nurses had a higher perception of passive avoidant styles.	
Al-Haroon, H. I., & Al-Qahtani, M. F. (2020).	To assess the level of organizational commitment among nurses in a major public hospital in Saudi Arabia and examine the impact of key sociodemographic variables on their organizational commitment.	Conducted a cross-sectional descriptive quantitative study at a major public hospital in Saudi Arabia in April and May 2019. Utilized a revised version of the three-component model (TCM) questionnaire, self-administered to 384 systematically selected nurses. Data were analyzed using Statistical Package for Social Sciences (SPSS) version 22, with mean scores compared using independent sample t-tests and analysis of variance (ANOVA). Multiple linear regression analysis was performed.	Included a systematic random sample of 384 nurses from a major public hospital in Saudi Arabia.	Of the 384 participants, 337 responded, resulting in an 88% response rate. Approximately 47.88% of the nurses agreed with all items related to the organizational commitment scale, while only 22.3% disagreed. Significant differences in commitment levels were observed among nurses in different age groups (p = 0.024). The continuous commitment subscale received the most positive responses.	Nursing policy makers should focus on strategies to recruit, attract, and retain committed nurses to enhance organizational commitment among nursing staff.

Aljarameez, F., Saha, C., Sinan, M., Rajan, L., Ahmed, G. Y., & Mutair, A. A. (2023).	To assess the relationships between structural empowerment, organizational commitment, and sociodemographic factors among critical care nurses in Saudi Arabia.	Employed a descriptive, cross-sectional, correlational research design. A convenience sample of 198 critical care nurses in Saudi Arabia completed a questionnaire, which included the Conditions of Work Effectiveness Questionnaire-II, the Three-Component Commitment Model, and a sociodemographic survey. Data were analyzed using the Statistical Package for the Social Sciences version 25, with statistical significance set at $p \leq 0.05$.	ncluded 198 critical care nurses working in Saudi Arabia.	Structural empowerment was significantly associated with organizational commitment. Employment in a private healthcare organization, non-Saudi Arabian nationality, longer nursing experience, more time in the current working unit, and average weekly working hours were significantly associated with higher organizational commitment and structural empowerment. Respondents in the higher salary bracket (over 15,000 Saudi riyals per month) had significantly lower levels of organizational commitment and structural empowerment.	The study highlights that structural empowerment is a key predictor of organizational commitment among critical care nurses. Managers and leaders should consider the significance of structural empowerment in efforts to improve nurse retention. Further research is needed to explore how factors such as nationality, salary, and experience affect empowerment and commitment, which can inform the development of relevant policies.
Al-Haroon, H. I., & Al-Qahtani, M. F. (2020).	To assess the organizational commitment among nurses in a major public hospital in Saudi Arabia and explore the impact of	The study used a cross-sectional descriptive quantitative approach and was conducted in a major public hospital in	The study included 384 nurses from a major public hospital in Saudi Arabia.	337 nurses (88%) responded to the survey. Approximately 47.88% of nurses agreed with all items related to the organizational commitment scale, while only 22.3% disagreed.	Nursing policy makers should develop strategies to recruit, attract, and retain committed nurses. Consider enhancing the organizational commitment of

	sociodemographic variables on organizational commitment.	Saudi Arabia during April and May 2019. A revised version of the Three-Component Model (TCM) questionnaire was self-administered to a systematic random sample of 384 nurses. Statistical analyses, including t-tests and ANOVA, were performed, and multiple linear regression analysis was conducted.		Significant differences in commitment levels were observed among nurses in various age groups. Continuous commitment received the most positive responses.	nurses by developing strategies. Explore policies and initiatives to improve commitment among nurses in different age groups.
Alsufyani, A. M., Alforihidi, M. A., Almalki, K. E., Aljuaid, S. M., Alamri, A. A., & Alghamdi, M. S. (2020).	To develop a policy framework that addresses the challenges in nursing practice in Saudi Arabia and aligns with the goals of the Saudi Vision 2030.	The study involved the presentation of a comprehensive plan for developing a policy, considering challenges, recognizing policy goals, assessing potential options and alternatives, identifying stakeholders, proposing recommended solutions, and implementing the	The study did not specify a particular sample as it was focused on policy development.	The Saudi government faces challenges in achieving "The Gold Standard" in nursing practice. Challenges include educational issues, staffing shortages, lack of benchmark evidence, undefined scope of nursing practice, and inadequate policies and regulations. The study presents a plan for policy development to address these challenges and link nursing transformation with the Saudi Vision 2030.	Consider implementing the proposed policy framework to address the challenges in nursing practice. Continuously update and adapt the policy framework to meet the changing needs and standards of healthcare in Saudi Arabia. Collaborate with stakeholders to ensure effective implementation and transformation of the nursing profession in alignment with the Saudi Vision 2030.

		framework for transforming nursing standards in alignment with the Saudi Vision 2030.		Amendments are necessary in the present strategic plan to improve nursing profession management.	
Banaser, M., Ghulman, F., Almakhalas, H., & Alghamdi, M. (2020).	To explore job satisfaction of nurses during the Hajj season 2018 in Saudi Arabia, identify predictors of nurses' job satisfaction, and provide insights for future healthcare policy.	Conducted a cross-sectional survey using a 24-item Nurses' Job Satisfaction Questionnaire with 198 nurses across 12 healthcare settings along the Hajj pilgrimage route. Explored six domains of job satisfaction: supervision, nature of work, retention, communication, workload, and co-workers.	The study included 198 nurses working during the Hajj season, and the sample was collected from 12 healthcare settings along the Hajj pilgrimage route.	Nurses reported a high level of job satisfaction during the Hajj season in 2018. All six domains of job satisfaction were significant predictors of overall job satisfaction. Areas with lower job satisfaction were related to complex policies and procedures, perceived incompetence of colleagues, and high workload.	Develop Hajj-specific skills training programs to enhance nurses' knowledge and competencies. Implement policies and procedures to manage workload and simplify nursing tasks during the Hajj. Improve the work environment, focusing on resource planning, interprofessional relationships, and communication, potentially using innovative technological approaches. Share findings with organizers of other mass gatherings worldwide as a reference.
Flores, I. F., Dator, W. L. T., Olivar, J. J., & Gaballah, M. K. (2023).	To explore the congruence of effective leadership values in nursing between nurse leaders and staff nurses in a multicultural tertiary	A descriptive sequential mixed-methods study conducted in a multicultural medical city in Saudi Arabia. Purposive sampling for the qualitative phase and stratified	Convenient sampling 33 nurse leaders and 37 staff nurses, and 571 participants in the quantitative phase, including 105 nurse leaders	Six emerging themes of congruent leadership values: (1) cascading deference; (2) paragon of probity; (3) professional competence; (4) compassionate presence; (5) team diversity and inclusion; (6) calibrated communication.	Foster leadership training and development programs that emphasize these congruent values. Promote a culture of diversity and inclusion to enhance teamwork.

	hospital in Saudi Arabia.	sampling for the quantitative phase. The study involved 70 participants in the qualitative phase, comprising	and 466 staff nurses.	The quantitative survey confirmed the essential nature of these values for both nurse leaders and staff nurses, with no statistically significant differences in perceptions, regardless of nationality.	Strengthen communication strategies that align with calibrated communication. Continue to prioritize professional competence and compassionate presence in nursing leadership. Implement practices that reinforce cascading deference and paragon of probity.
Harb, A., Alkhalaf, M., Silva, J., Ngala, A., Blancaflor, A., & Al Bazroun, M. (2023).	To identify empowerment strategies for diploma nurses in the Eastern Health Cluster, Saudi Arabia.	A qualitative and quantitative study using a grounded theory approach. Conducted in three Health Network facilities within the Eastern Health Cluster over nine months.	Fifteen diploma nurses and three Nurse Directors were enrolled. A research questionnaire and focus group interviews were employed for data collection and analysis.	Three main strategies to empower diploma nurses: (1) Perception of diploma nurses' performance, (2) areas for improvement, and (3) education enhancement. - Appreciation and recognition play essential roles in empowering diploma nurses. - Providing part-time bridging programs through universities and opportunities for enrollment in transformation programs can enhance diploma nurses' education and empowerment.	Implement strategies for recognizing and appreciating the contributions of diploma nurses. - Develop part-time bridging programs in collaboration with universities. - Offer opportunities for diploma nurses to enroll in transformation programs to enhance their education and professional development. - Expand the research to assess the effectiveness of these empowerment strategies on diploma nurses' performance and job satisfaction.
Lin, T. K., Bruckner, T. A., Alghaith, T., Hamza, M. M., Alluhidan, M., Herbst, C. H.,	To project health labor market dynamics and plan for a resilient health workforce in Saudi Arabia during a time	Utilized Ministry of Health Yearbook data from 2007 to 2018 to project health labor supply and demand through	The study used a stratified sampling method for the quantitative part, where participants were selected from	Projected overall health labor market to demand 9.07 physicians and nurses per 1,000 population in 2030. - Public sector to account for about 67% of this overall demand. -	Implement supply- and demand-side policy interventions to address shortages of Saudi health workers and enhance health system resiliency in Saudi

... & Liu, J. X. (2021).	of healthcare system transition.	2030. Evaluated potential shortages and surpluses, and simulated policy scenarios to identify relevant interventions. Focused on projections for Saudi national health workers and public sector health worker demand.	different strata or subgroups within the population. In this case, it involved 105 nurse leaders and 466 staff nurses. For the qualitative phase, a purposive sampling technique was used to select participants. Purposive sampling involves selecting individuals based on specific criteria that are relevant to the research, ensuring that the sample represents the characteristics of interest. In this phase, there were 33 nurse leaders and 37 staff nurses selected, resulting in a total of 70 participants.	Estimated a modest overall surplus of about 42,840 physicians and nurses in 2030, but only about 17% of these workers are estimated to be Saudi nationals, leading to a demand shortage of 287,895 Saudi workers. - Increasing work hours and bridge programs for training more nurses can reduce shortages of Saudi workers. Redirecting government resources to support Saudi nurses while ensuring an adequate number of physicians can help meet service delivery goals.	Arabia. - Prioritize policies that increase productivity among Saudi health workers, enhance nursing training, and strategically reallocate financial resources for employing these workers. - Continuously monitor and adapt workforce planning to the evolving healthcare landscape in Saudi Arabia.

In a study conducted by Alharbi, Dahinten, and MacPhee (2020), the aim was to explore the links between nurses' work environment components and emotional exhaustion, job satisfaction, and intent to leave in Saudi Arabia. They employed a descriptive correlational

design and used convenient sampling with 497 Registered Nurses in Riyadh, Saudi Arabia, in 2017. The key findings revealed that nurse participation in hospital affairs was significantly linked to emotional exhaustion, job satisfaction, and intent to leave. Factors such as staffing and resource adequacy also influenced emotional exhaustion and job satisfaction, while nurse manager ability, leadership, and nurse-physician relationships impacted job satisfaction. The study emphasized the importance of Magnet-like work environments to recruit and retain nurses in Saudi Arabia and suggested tailoring recruitment and retention strategies to focus on specific work environment components.

Results

Based on the 15 selected studies, several key themes, sub-themes, and trends can be identified:

Themes1

1. **Work Environment and Nurse Well-being:** Several studies (Alharbi et al., Bindayel, Alsufyani et al., Al-Haroon & Al-Qahtani) explored the relationships between nurses' work environments and their well-being, including emotional exhaustion, job satisfaction, and intent to leave. The common finding across these studies was the significant impact of the work environment on nurse outcomes.

2. **Leadership and its Impact:** Leadership styles and their impact on nurses' outcomes were a recurring theme (Alilyyani, Harb, Flores). Authentic leadership, transformational leadership, and management styles were found to influence nurses' job satisfaction, turnover intentions, and perception of leadership in healthcare settings.

3. **Empowerment and Policy Interventions:** Studies like Alluhidan et al., Aljarameez et al., and Alsufyani et al. discussed policy interventions and empowerment strategies for nurses. These interventions included improving the work environment, enhancing leadership, and addressing challenges in nursing practice to retain and recruit nurses effectively.

Sub-themes:

1. **Impact of Saudi Vision 2030:** Multiple studies (Alluhidan et al., Alsufyani et al., Alsufyani et al., Lalithabai et al., and Alsufyani et al.) discussed the alignment of nursing practices with Saudi Vision 2030, emphasizing the need for a nursing policy framework, nursing transformation, and innovation to meet the healthcare goals of the nation

2. **Sociodemographic Factors:** Studies like Aljarameez et al., Lalithabai et al., and Al-Haroon & Al-Qahtani examined the role of sociodemographic factors on organizational commitment, empowerment, and structural empowerment among nurses in Saudi Arabia.

Trends:

1. **Innovation in Nursing:** The need for innovation in nursing practices and recruitment was a recurring trend, with studies like Bindayel, Al-Haroon & Al-Qahtani, and Lalithabai et al. highlighting the importance of innovation in tackling nursing shortages.

2. **Alignment with Saudi Vision 2030:** Several studies indicated the importance of aligning nursing policies and strategies with Saudi Vision 2030 to achieve healthcare transformation.

3. **Leadership Styles:** Leadership styles, particularly authentic and transformational leadership, were trending topics with a focus on their influence on nurse outcomes and organizational performance.

Explanation

The identified themes, sub-themes, and trends collectively illustrate the dynamic landscape of nursing in Saudi Arabia. They reflect the challenges, opportunities, and evolving strategies in the Saudi healthcare system. The emphasis on aligning nursing practices with Saudi Vision 2030 underlines the nation's commitment to healthcare transformation and the need for innovative approaches to address nursing shortages and enhance nurse well-being. Leadership styles and the work environment have been central concerns in understanding and improving nurses' job satisfaction, retention, and overall outcomes. Empowerment strategies and policy interventions are essential to empower nurses and create conducive work environments. These findings offer valuable insights for healthcare policymakers, administrators, and researchers to shape the future of nursing in Saudi Arabia.

Discussion

To understand how nurse recruitment and retention strategies can be optimized within the cultural and healthcare context of Saudi Arabia, we can draw valuable insights from a series of research studies conducted in the region.

The healthcare landscape in Saudi Arabia is undergoing significant transformation in line with the Saudi Vision 2030. As highlighted in studies such as "Challenges and Policy Opportunities in Nursing in Saudi Arabia" (Alluhidan et al., 2020) and "Linking the Saudi Arabian 2030 Vision with Nursing Transformation in Saudi Arabia" (Alsufyani et al., 2020), aligning recruitment and retention strategies with these broader healthcare objectives is essential.

Nurse well-being is a fundamental consideration. Research, such as "The Relationships Between Nurses' Work Environments and Emotional Exhaustion, Job Satisfaction, and Intent to Leave Among Nurses in Saudi Arabia" (Alharbi et al., 2020), underscores the need for work environments that promote job satisfaction, reduce emotional exhaustion, and minimize nurse turnover. Achieving this involves ensuring optimal staffing, adequate resources, and effective leadership practices.

Innovative leadership styles, as indicated in "Innovation Leadership and Employee Behaviors in Nurse Recruitment in Saudi Arabian Hospitals" (Bindayel, 2022), play a vital role in attracting and retaining nursing professionals. Healthcare organizations must adopt

leadership practices that align with Saudi cultural values and preferences.

Communication satisfaction, as emphasized in "Impact of Work Environment Perceptions and Communication Satisfaction on the Intention to Quit: An Empirical Analysis of Nurses in Saudi Arabia" (Alsufyani et al., 2021), is a key factor in nurse retention. Strategies should enhance communication channels to ensure that nurses feel engaged and valued.

Future workforce planning, as outlined in "A Needs-Based Methodology to Project Physicians and Nurses to 2030: The Case of the Kingdom of Saudi Arabia" (Gailey et al., 2021), is essential. Recruitment strategies must align with projected healthcare demands, ensuring the right number of nursing professionals.

Understanding how nurses perceive leadership, as discussed in "Nurses' Perceptions of Nursing Leadership Styles in the Eastern Healthcare Cluster in Saudi Arabia" (Harb et al., 2022), is vital. Effective strategies should be tailored to meet the expectations of the nursing workforce in Saudi Arabia.

Fostering organizational commitment, as evaluated in "Assessment of Organizational Commitment Among Nurses in a Major Public Hospital in Saudi Arabia" (Al-Haroon and Al-Qahtani, 2020), is pivotal for nurse retention. Creating a culture that promotes commitment is essential.

Empowering the nursing workforce, as seen in "Strategies to Empower Diploma Nurses in Eastern Health Cluster-Saudi Arabia" (Harb et al., 2023), is crucial for retaining and engaging nursing staff.

Effective onboarding, as demonstrated in "Using Action Research to Evaluate a Nursing Orientation Program in a Multicultural Acute Healthcare Setting" (Lalithabai et al., 2021), is important for new nursing staff. Optimizing recruitment involves providing structured orientation programs for a seamless transition into their roles.

Maintaining job satisfaction, especially during peak events like "Nurses' Job Satisfaction during the Mass Gathering of the Hajj 2018 in Saudi Arabia" (Banaser et al., 2020), is vital. Strategies should focus on sustaining high job satisfaction levels throughout the year.

Building a resilient workforce, as highlighted in "Projecting Health Labor Market Dynamics for a Health System in Transition: Planning for a Resilient Health Workforce in Saudi Arabia" (Lin et al., 2021), is essential. Strategies should focus on creating a workforce that can adapt to the changing healthcare landscape and deliver consistent high-quality care.

Finally, ensuring cultural congruence in leadership values, as examined in "Congruence of Effective Leadership Values Between Nurse Leaders and Staff Nurses in a Multicultural Medical City in Saudi Arabia" (Flores et al., 2023), is essential for success in nurse

recruitment and retention. Leadership practices should resonate with Saudi cultural values to create an attractive environment for nurses.

Optimizing nurse recruitment and retention strategies in Saudi Arabia is a multifaceted process that requires a holistic approach, encompassing the Saudi healthcare context, leadership styles, communication satisfaction, workforce planning, and alignment with nurse perceptions, organizational commitment, empowerment, onboarding, job satisfaction, resilience, and cultural congruence. These elements collectively contribute to building a strong and committed nursing workforce within the unique cultural and healthcare context of Saudi Arabia.

Limitations

The limitations of the research studies selected to investigate nurse recruitment and retention strategies within the Saudi Arabian healthcare context must be carefully considered. One of the primary limitations is the relatively narrow scope of the studies, as they often focus on specific facets of nurse recruitment and retention. This specialization may not provide a comprehensive view of the complex challenges faced within the Saudi healthcare system. Additionally, many of the research designs utilize cross-sectional methodologies, which can provide insights into the present but may not capture the dynamic and evolving nature of the healthcare workforce over time. Furthermore, a significant number of the studies are confined to specific healthcare clusters or regions within Saudi Arabia, potentially limiting the generalizability of the findings to the entire nation. Future research should aim to address these limitations by adopting more longitudinal designs and broadening the scope to include various healthcare settings and specialties.

Suggestions

Shifting to suggestions, the research findings provide valuable insights into how nurse recruitment and retention strategies can be optimized within the cultural and healthcare context of Saudi Arabia. It is clear from the studies that creating supportive and empowering work environments is paramount. This involves ensuring that staffing levels are adequate, resources are available, and leadership practices align with the cultural values of Saudi Arabia. Effective communication channels that promote nurse engagement and satisfaction should be established and maintained. Accurate workforce planning based on healthcare needs and projections is crucial. Structured orientation programs, particularly for new nursing staff, must be comprehensive and ongoing. Initiatives to maintain high job satisfaction and foster organizational commitment should be continuous. Strategies for building resilience and adopting culturally congruent leadership

practices should also be integrated into nurse management approaches.

Recommendations

Building upon the research findings, several recommendations can be made to enhance nurse recruitment and retention strategies in the unique Saudi Arabian context. Healthcare organizations should prioritize the adoption of innovative leadership styles that resonate with the Saudi cultural values, such as authentic and transformational leadership. They should promote open and respectful communication between nursing staff and leadership, enabling nurses to voice their concerns and participate in decision-making processes. Offering a clear pathway for career development and empowerment opportunities is vital to retain talented nursing professionals. Orientation programs should be designed to ensure new nurses feel integrated and confident in their roles. Continuous efforts to maintain high job satisfaction levels and foster organizational commitment should be a top priority. Finally, workforce planning initiatives should align with the evolving healthcare needs of Saudi Arabia and focus on addressing shortages and surpluses effectively.

Conclusion

The research studies collectively underscore the importance of tailoring nurse recruitment and retention strategies to the Saudi Arabian cultural and healthcare context. Acknowledging the limitations, it is evident that optimizing these strategies requires a multifaceted approach, encompassing factors like empowering work environments, communication satisfaction, workforce planning, leadership alignment with nurse perceptions, organizational commitment, empowerment, onboarding, job satisfaction, resilience, and cultural congruence. By embracing these recommendations and fostering continuous improvement, healthcare organizations and policymakers aim to create a strong and committed nursing workforce capable of delivering high-quality care within the Saudi Arabian healthcare system. The ultimate goal is to meet the evolving healthcare demands of the nation and ensure the well-being of both healthcare professionals and the patients they serve.

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