Development Of Nursing Research In Saudi Arabia A Review Study

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Abstract

Introduction: The introduction explains how Nursing Research in Saudi Arabia has changed over time from being a marginal area of study in the academic fields to becoming one of the essential foundations of the National Health Care Strategy for Saudi Arabia. Nursing has changed position since the launch of the Health Sector Transformation Programme and Saudi Vision 2030 from that of a vocational, task oriented professional to that of an Evidence-based, independent Scientific Professional.

Objective: The purpose of this systematic review is to create a detailed overview of the past and present state of Nursing Research in the Kingdom of Saudi Arabia through an analysis of old and existing literature.

Method: This study's method follows the PRISMA 2020 guidelines for systematic reviews. A full systematic review search was performed in five electronic databases: PubMed, CINAHL, Scopus, Web of Science and The Saudi Digital Library. Only peer-reviewed articles published in English relevant to the Nursing profession in Saudi Arabia were included in this study. Screening and extraction of data from these studies was done using Covidence by two independent reviewers, and methodological quality was assessed using the Joanna Briggs Institute (JBI) standardised checklist. The analysis of the information included in these studies was conducted using Thematic Synthesis.

Conclusion: Research being conducted in the field of nursing in the Kingdom has grown to be more developed, with more authorship from local Saudi scholars and an increased focus on digital health and more specialized clinical inquiries. While there is an increase in support by institutions for Evidence-Based Practice (EBP), especially for hospitals that are seeking Magnet Recognition, there are still many significant obstacles such as clinical workload, lack of protected research time, and little statistical literacy. There is a need for future efforts to have sustainable funding, to support mentorship opportunities between the academic setting and the clinical setting, and to leverage the Kingdom's current digital infrastructure to conduct some of the best interventional studies.

Keywords: Nursing Research, Nursing Education Research, Clinical Nursing Research, Evidence-Based Nursing, Nursing Scholarship, Development of Nurses, or Nurses Professionalization.

Introduction

Modern clinical practice largely relies on nursing research as the foundation to get scientific evidence needed to enhance patient outcomes, streamline healthcare delivery systems, and advance nursing education. [2] The shift towards Evidence-Based Practice (EBP) has been a worldwide phenomenon that has transformed the role of a nurse as a task-oriented caregiver to a critical thinker and scientific contributor. In the Kingdom of Saudi Arabia (KSA), such a shift has been especially radical, as it is characterized by a swift shift in a vocationally oriented service to a highly professionalized field of study. [5]

Saudi Nursing Historical Background

The history of nursing in Saudi Arabia dates back to the mid 20 th century, when the first health institutes were opened in the 1950s. The first emphasis was on technical training in order to support the increasing population. The Saudi healthcare system has been dependent on a diverse expatriate labor force over several decades and, although it delivered the necessary services, it resulted in a disjointed professional identity. [7] The research in nursing at this period was practically nonexistent with the main aim of clinical stabilization and increase of workforce. It changed direction during the late 1970s and 80s when the first major institutions such as the King Saud University started baccalaureate nursing programs. This trend marked the onset of the academic era in Saudi nursing. By 1987, the possibility of a research culture had been planted by the introduction of the first Master's program. Nevertheless, initial research delivery was intermittent, and was usually constrained to scholarly theses which were seldom translated into clinical policy. [1], [9]

The Catalyst of Change Vision 2030

The introduction of Saudi Vision 2030 and related Health Sector Transformation Program has served as a giant catalyst toward nursing research. The Vision has three pillars, namely a dynamic society, a prosperous economy and an ambitious nation. In the case of the healthcare industry, this would be a requirement of quality, efficient, and value care. This change focuses on nursing research. [11], [12] The Saudi Commission for Health Specialties (SCFHS) and the Ministry of Health (MOH) have identified that the establishment of international standards, e.g. Magnet Recognition Program or the accreditation of Joint Commission International (JCI) imply the need to have a strong nursing inquiry infrastructure. Hospitals are ceasing being merely a place of care, they are also being transformed into learning organizations where nurses are now more than welcome to discover clinical issues, pilot studies, and introduce evidence-based strategies. [7], [4]

The Digital Revolution and the Academic Revolution

The growth of postgraduate education has had a central role. Due to the investment of Saudi government in local and overseas scholarship programs, new generation of Saudi nurse scientists has been formed. These researchers have PhDs in the global leading universities and they have come back to the Kingdom to head research departments, train junior employees and write in the high-impact international journals. Moreover, the Digital Saudi initiative has introduced modern technology in the research field. [4], [5] The popularity of Electronic Health Records (EHR) and the application of Artificial Intelligence (AI) in predictive analytics have offered numerous new opportunities to nursing researchers in the form of so-called Big Data. This enables the use of large-scale longitudinal studies where before it was not feasible and taking the field beyond the simple descriptive surveys and complex data-driven interventions. [7]

The nursing research output that is published in the KSA continues to increase exponentially, with the field on a critical crossroad. Most of the current literature is scattered in different fields of clinical specialties, and there is a perceived gap between the research in academic and its bedside application. [8] Moreover, research hindrances (time limitations and organizational backing) are often mentioned, but no recent and wholesome synthesis of the effects of these two factors has been conducted in the past decade. A literature review is thus necessary to chart out the existing state. The synthesis of the available data helps this study determine the leading research trends, assess the quality of the methods

used in the recent Saudi nursing studies and identify the specific structural and cultural constraint that continue to limit the complete integration of research in the clinical practice. [9]

Reason and Justification of the Research
The purpose of the implementation of this systematic review is explained by the fact that this direction is the critical intersection of rapid healthcare reform and the professional development of nursing in the Kingdom of Saudi Arabia. Saudi Arabia, being the biggest healthcare market in the Middle East, is now going through an unprecedented change and thus it is not only timely, but also imperative to conduct a thorough assessment of its nursing research infrastructure. [6], [8] The Kingdom has the focus of enhancing the quality, efficiency, and accessibility of healthcare services under the Health Sector Transformation Program. One of the main needs to achieve this change is to incorporate Evidence-Based Practice (EBP) in the everyday activities of the more than 235,000 registered nursing professionals in the nation. The research is required to determine whether the production of research is efficiently supporting these national strategic aims or whether there is still a gap between the high-level policy and bedside practice research. [11], [12]
Even though the quantity of nursing journals published in Saudi Arabia has grown exponentially during the past 10 years, a good part of the material is restricted within the confines of the academic circles. The existence of a research-practice gap exists where we have documented that clinical nurses tend to consider research as an academic obligation as opposed to a clinical improvement tool. The demographic change in the nursing workforce is due to a high percentage of the local population in the so-called Saudization (Nitaqat) initiative. [6], [9] Such a shift introduces a distinct cultural, linguistic, and professional angle in the research field. The dynamic between the development of nursing research in this shift is crucial to developing viable professional development models in the coming generation of Saudi nurses. Recent literature indicates that Saudi-based nurses suffer immense hindrances although there is a positive attitude towards research. [12]

Significance of the Study
The research is important in the sense that it gives a state of art report on Saudi nursing. This review will serve as a guide to funding agencies and academic institutions to allocate their resources to the most promising areas of research by defining which areas in clinical practice (e.g., critical care, oncology, or palliative care) are over-represented and those that need attention.

Study Objective
The purpose of this systematic review is to create a detailed overview of the past and present state of Nursing Research in the Kingdom of Saudi Arabia through an analysis of old and existing literature. This review will document how Nursing Research has progressed within the Kingdom of Saudi Arabia from the beginning of Nursing School and Associate Degree Programs to where it is now in terms of Professional Autonomy.

Research Methodology
Research Question
The research questions of the current study are:
Question 1: How much more successful in the growth of Nursing Research are local Saudi Nursing Scholars versus collaborative efforts with International Nurses/Expatriates.
Question 2: How much has the emphasis on Nursing Research changed from descriptive or traditional forms of Nursing Research to the Advanced Forms (Digital Health (AI and TeleHealth) and Advanced Practice Nursing).
Question 3: What type of institutional supports (Magnet status projects, Research Funding, Educational Partnerships between Hospitals & Universities) have contributed to creating a research environment for Nursing?.

Research Design
The current work employs a systematic review design, and its synthesis of literature is based on the guidelines of Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA) 2020

to make the work rigorous, transparent, and reproducible. Since the study will focus on trending the progression of nursing research in Saudi Arabia, it is important to be systematic to ensure the reduction of bias and give the stratum level overview of evidence over time. The design is going to be a multi-step one: it will be necessary to outline a specific search strategy and use it in international databases (including PubMed, CINAHL, and Scopus), implement the use of strict inclusion and exclusion criteria and conduct a quality assessment of the obtained studies with the help of such an instrument as the Joanna Briggs Institute (JBI) checklists.

Search Strategy

The systematic review search of literature has been performed using a structured and comprehensive search query in five main electronic databases, namely PubMed (MEDLINE), CINAHL, Scopus, the Saudi Digital Library (SDL), and Web of Science. A combination of Medical Subject Headings (MeSH) and free-text keywords was used in the search to guarantee a high degree of sensitivity and specificity. Truncation was used to include all the appropriate variations of terms (e.g., Saudiz*) (e.g. Saudization or Saudized). The literature search was restricted to peer-reviewed articles within the period of January 2010-January 2026, which was the contemporary period of healthcare transformation in the Kingdom.

Types of Studies Included

In order to achieve the maximum level of evidence and to have a comprehensive picture of the research landscape, the range of primary peer-reviewed studies with different methodological designs was rather broad in this systematic review. Quantitative research such as cross-sectional surveys, quasi-experimental researches and longitudinal cohort studies were ranked first to track the quantity and statistical patterns of research output. At the same time, qualitative inquiries (including phenomenological studies, grounded theory and ethnographic reports) were also to be incorporated to elucidate the subtle lived experiences of Saudi nurses and the cultural intricacies of the occupation. Mixed-method research was also included that offers a mediated point of view between statistical information and contextual descriptions. On the other hand, to adhere to strict scientific criteria, the review filtered out non-empirical articles like editorial, commentary, and conference abstract, and articles that did not specifically deal with the Saudi Arabian healthcare setting or nursing manpower.

Keywords

In order to enhance the sensitivity of search, following keywords were used separated by Boolean operators (AND, OR) :
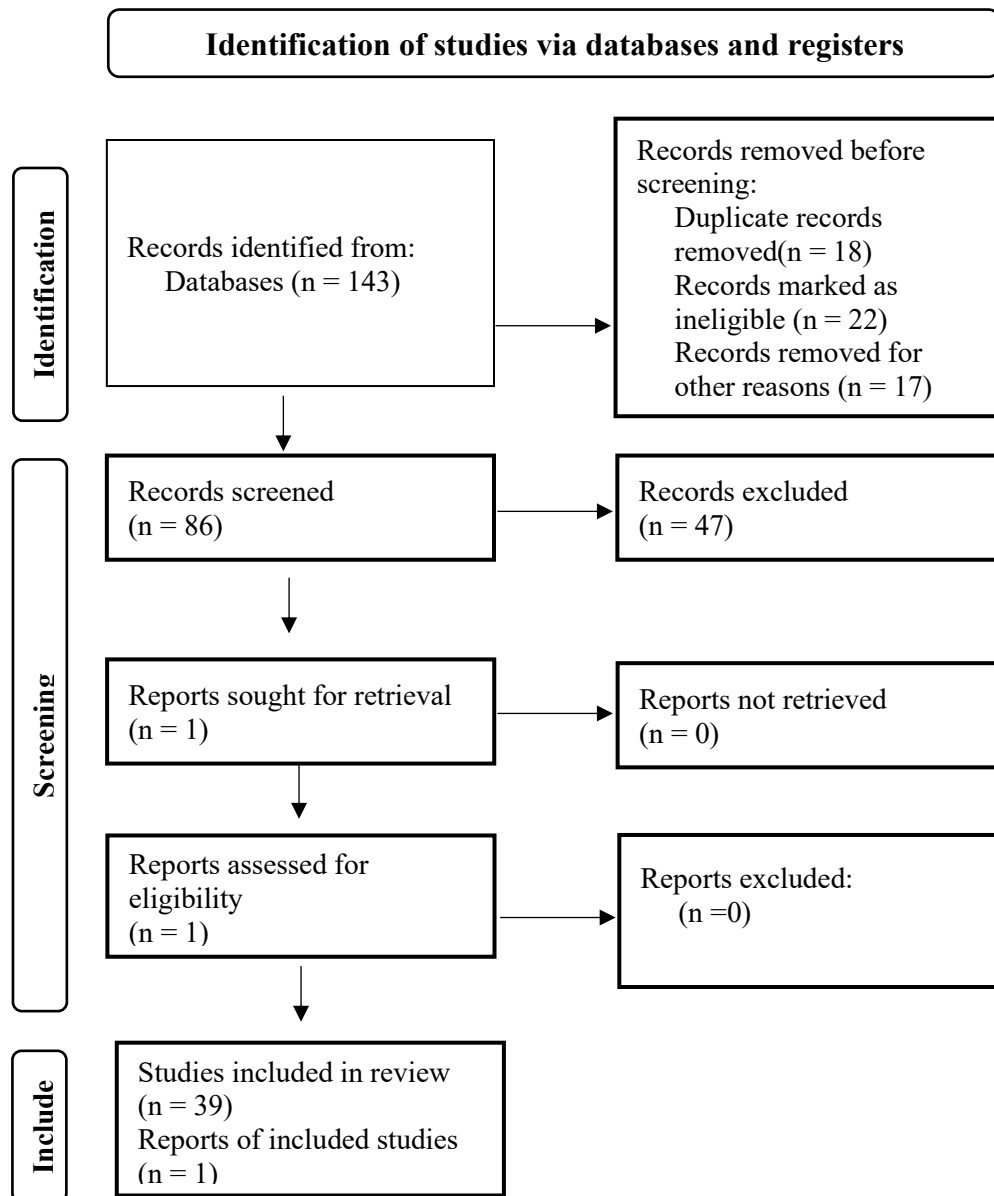"Nursing Research" OR "Nursing Education Research" OR "Clinical Nursing Research" OR "Evidence-Based Nursing" OR "Nursing Scholarship" AND "Saudi Arabia" OR "KSA" OR "Kingdom of Saudi Arabia" OR "Saudi" AND "Development" OR "Evolution" OR "Trends" OR "Progress" OR "Barriers" OR "Challenges" OR "Future" OR "Professionalization".

Data Management

A structured data management protocol was applied to the data to guarantee the integrity of the data and to provide a collaborative review process. Firstly, all the citations identified during the multi-database search were loaded into EndNote 21 to store them centrally and preliminary de-duplicate of the results. The narrowed down list was subsequently submitted to Covidence, a dedicated systematic search tool where title and abstract screening were done by two independent reviewers. To extract data, a standardized electronic form was created and tested on a sub sample of five studies to be consistent. This type summarized such crucial variables as author, year of publication, study design, clinical specialty, sample size, key findings, and the identified barriers. A third senior researcher was used as an adjudicator, in the event of a discrepancy between the two main reviewers to agree on a consensus. Thematic coding and qualitative synthesis was done by exporting all final datasets into Microsoft Excel.

Results

A total of 143 research studies and one report was identified, the studies were evaluated as per the availability of research articles and reports, based on development of nursing research in Saudi Arabia.

Identification of studies via databases and registers

Source: Page MJ, et al. BMJ 2021;372:n71. doi: 10.1136/bmj.n71
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Out of these identified studies, 18 were removed because of duplication of records, references and location and 22 studies were marked as ineligible, as not including the above stated concept and 17 for some other unavoidable conditions. One report was also included in the study.

In terms of the synthesis of the available systematic reviews and primary research, it can be stated that the outcome of the nursing research in Saudi Arabia can be divided into four areas: Research Productivity, Thematic Focus, Methodological Quality, and Key Barriers/Facilitators.[13] The latest systematic reviews (e.g., the one by Al Anazi et al. 2025; ResearchGate 2023) demonstrate a very strong increase in the number of researches.

Growth: It is observed that there has been a constant growth of publications since 2016, which is in line with the introduction of Saudi Vision 2030. [14]

Authorship: Saudi scholars have become first authors of over 53 percent of studies, and the research world has been transformed by the expatriate-dominated research space to a locally scientific community. [6], [8]

Funding: Although the number of published studies is increasing, approximately 42 percent of the studies are not funded, and most of the funding is provided through academic institutes and not through hospital clinical funds. [6], [7]

Dominant Research

Themes Clinical landscape is the main area of investigation, although new domains are appearing.

Clinical Practice (56.7%): The majority of studies are concentrated on bedside care especially critical care and oncology. [8]

Nursing Management (20%): Research on the leadership style, job satisfaction, and high turnover (statements spread up to 41% among Saudi nurses). [9]

Nursing Education (17.5%): The emphasis is made on creating a new curriculum and incorporating simulation-based training. [10]

Specialized Care:Large volumes of literature are discussing the Palliative Care (PC) and Evidence-Based Practice (EBP) implementation. [11]

Methodological Trends Study Designs

An estimated 71 percent of research involves quantitative methods which are mainly descriptive cross-sectional surveys. [7]

Qualitative Growth: With around 20.5 percent, the qualitative studies are on the rise, and mostly through phenomenology, in order to uncover the effects of culture on nursing. [12]

Sampling: The most frequent sampling is convenience sampling (53.3%), and there should be more effective sampling techniques, which are not randomized and representative to enhance generalizability. [13]

Frameworks: There is a major gap in terms of theoretical application; more than 83 percent of the studies lack conceptual/theoretical frame. [14]

Evidence-Based Practice (EBP) Adoption

Findings indicate that Saudi-based nurses possess a positive attitude to EBP, and acceptable levels of knowledge, but implementation scores are the lowest. [15] This has been highly contributed by resource constrained environments and inadequate information-seeking expertise among the labor force. [16]

Discussion

The results of this systematic review depict a profession that is undergoing a historic change. Nursing research construction in Saudi Arabia is no longer an individual scholarly endeavor; it has become a national strategic interest. In this part, the author examines implications of the findings, paradigm shift in Saudi nursing, and challenges that were left behind. [17]

The Vision 2030 Impact

The Technical to the Knowledge-Based. The Saudi Vision 2030 has been the greatest research development driver. Before this requirement, the research in nursing was limited to faculty in the universities to a great extent. The expectation of clinical nurses in the Health Sector Transformation Program has changed today. [18] The most notable elements of the push towards "Saudization" are that it has not only raised the number of local nurses but has also created a professional identity founded upon scientific inquiry. The outcome is a shift towards a task-completion model of nursing to knowledge based model wherein nurses are regarded as independent decision-makers. [19], [20]

Thematic Shifts: The Demands of The Contemporary Healthcare. Clinical research is still the prevalent one; however, there is a modernization of the research topics. [7], [8] What we are witnessing is the shift between simple descriptive research (e.g.: Knowledge of hand hygiene) to a complicated issue like:

Digital Transformation: Studies in telenursing, AI-guided triage, and Mawid and Sehhaty platform effects. Niche Care: An increase in the palliative care and cancer studies, triggered by the rising rate of non-communicable diseases in the Kingdom. [9], [12]

Professional Identity: Qualitative research about the notion of nursing image in Saudi society reveals that with the increase in education level, the social stigma of nursing is slowly fading, but the work-life balance is still one of the crucial issues that lead to nurses leaving their jobs. [13], [14]

Methodological Maturity and the Quality Gap

The findings reveal that the quality and level of evidence are still on the maturity stage and the number of research is growing. The excessive use of cross-sectional surveys (71%) shows a moment in time of what issues are being experienced, but it is not causal. To be able to have a real impact on policy, the Saudi nursing fraternity will have to shift towards experimental designs, longitudinal studies and meta-analyses capable of delivering the so-called gold standard of evidence that is needed to inform national clinical guidelines. Besides, the absence of theoretical frameworks in more than 80 percent of studies indicates that the nursing research in KSA is now more of a problem-oriented rather than theory-driven research.[15], [16] The "Time-Support" Paradox Another theme that can be identified in the findings is the paradox of high institutional expectations and low practical support.

Research is required to advance a career (e.g.: from Nurse to Specialist), which is required by organizations such as the Saudi Commission for Health Specialties (SCFHS), but bedside nurses complain that patient acuity and endemic understaffing make research activities virtually unachievable. [17], [18]

The Personal Barrier: Statistical confidence deficiency and language barriers.

The Institutional Barrier: An organizational culture that continues to place emphasis on the time at the bedside, rather than minutes in the library. [19], [12]

Gap Closing: The Magnet Recognition. Pursuing Magnet Recognition is one of the most effective identified facilitators. Hospitals that have attained or are targeting such a position (like King Faisal Specialist Hospital) have much higher proportions of research led by nurses. This implies that in the case of research being embedded in the organizational DNA and its association to international prestige, the obstacles of time and support can be broken with ease. [13], [14]

In Saudi Arabia, nursing research has been able to pass through its infancy period.

The infrastructure has been established to a great extent: the universities are graduating scholars, the government is giving the vision, the hospitals are giving the data. The second step of evolution should be concerned with sustainability - so that the results of the research would not be shared by consulting journals - but rather be put into action and change the rules of Saudi healthcare. [14], [15]

Conclusion

A major turning point in the development of nursing research in Saudi Arabia has come where the country has ceased being dependent on academic faculties and made a turn to professional autonomy and scientific maturity. Following the inspirational goals of Saudi Vision 2030, nursing research has ceased to be a marginal activity, but a fundamental part of the Kingdom Health Sector Change. This systematic review has identified a massive increase in the volume of publications, diversification of research topics- especially in digital health and targeted clinical care, and a rapidly expanding group of Saudi nurse scientists. Nevertheless, the road to international leadership in the field of nursing science is still challenging in terms of dealing with the longstanding research-practice gap. The infrastructure in the education and publication field has been reinforced, but the findings implementation in the clinical protocols at the bedside is not even-distributed because of the organizational obstacles and workloads. Finally, professionalization of nursing in the Kingdom cannot be discussed without referring to its research ability; since nurses cease being users of evidence and become generators of knowledge, they are guaranteed their place as the key architects of the Saudi healthcare future.

Future Scope of Study

It is of urgent necessity to stop using cross-sectional surveys and start using Randomized Controlled Trials (RCTs) and longitudinal studies in order to assess the long-term effects of nursing interventions

on patient outcomes in the Saudi environment. As the Kingdom has highly developed digital infrastructure, further study needs to take advantage of Electronic Health Records (EHR) and Artificial Intelligence by creating prediction algorithms to improve patient safety, nurse staffing, and disease management. The future research should clearly be in accordance with the national objectives of the Ministry of Health under the Value-Based Healthcare, which is cost-efficiency and the economic effect of advanced nursing positions.

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