

ADVANCING NURSING KNOWLEDGE: AN OVERVIEW OF SAUDI ARABIAN NURSING EDUCATION

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Abstract

Background: Nursing education in Saudi Arabia has evolved significantly since its inception in 1948, transitioning from male-only diploma programs to a comprehensive array of qualifications, including bachelor's, master's, and doctoral degrees. Despite these advancements, the sector faces multiple challenges, particularly in aligning with the goals set by Saudi Vision 2030. This review identified some key issues from nursing education trends in Saudi Arabia.

Method: A search for papers on Google and Google Scholar was done using the topic as the search phrase. Out of 106 papers identified, only 22 were eligible for inclusion in this review.

Results & Discussion: Key issues include a high dependency on expatriate nurses, low graduation rates, inadequate skill development, and cultural barriers, particularly for female nurses. Institutional and policy deficits, such as ineffective Saudization policies, a lack of coherent training in evidence-based practice, and fragmented regulatory oversight, further exacerbate these problems. The COVID-19 pandemic has highlighted the need for robust online education platforms and improved healthcare training, with studies indicating a positive yet anxious attitude among nursing students towards e-learning and vaccination. Solutions suggested include streamlining regulatory bodies, enhancing curricula to include critical thinking and problem-solving skills, improving the attractiveness of the nursing profession, and ensuring continuous review of educational policies.

Conclusion: This review underscores the necessity for coordinated efforts in policy reform and practical training enhancements to bolster the nursing workforce, thereby meeting the future healthcare needs of Saudi Arabia's growing population.

Keywords: Nursing education, Saudi Arabia, Policy, Healthcare needs, Review

Introduction

The description of the history and development of nursing education in Saudi Arabia, provided by Aljohani (2020), is summarised here. Nursing education in Saudi Arabia has a history of over seven decades. It started in 1948 with diploma courses for males. This was followed by initiatives by individuals, MOH, and the Ministry of Defence through the 1950's. With the establishment of MOE in 1975, nursing education programmes at university levels were started with female students first and later male students in 2004. Programmes at associate, diploma, graduate, post-graduate, and doctorate levels were started gradually to cater to different needs (Alotaibi, et al., 2023). In 2017, there were 39 nursing colleges, 13 of them in the private sector. Total enrolment for bachelor's degree was 17085. International scholarships enabled 813 students to study nursing in universities abroad. The bachelor's degree programme (RNP) is a four-year course, and the bridging programme (BNP) for students with

other qualifications is a two-year course. There is a one-year internship programme at the end of the courses that covers multiple healthcare departments. The programme for male students is slightly different. The Master's programme of two-year full-time courses was initiated in 1987 for female students and was extended to male students in 2013 and has specialisation in different specialities of nursing care. The first PhD programme in nursing was introduced at King Saud University in 2019. A collaborative programme between Aramco and John Hopkins University USA for a doctorate in nursing practice (DNP) also exists. The Education and Training Evaluation Commission (ETEC), through the National Commission for Academic Accreditation and Assessment (NCA), National Framework System and Saudi Arabia Qualifications Framework (SAQF), is involved in setting standards and ensuring the quality of nursing education. The Saudi Commission for Health Specialties (SCFHS) is responsible for the professional classification and registration of health specialities for employment under the Ministry of Civil Services. There are also continuing education programmes for nurses to update their knowledge. However, multiple agencies with cross-purposes create some confusion on who controls what, leading to inefficiencies and delays affecting the goals.

Some attempts to reform nursing education have been initiated as a part of Saudi Vision 2030. The goals of Vision 2030 of Saudi Arabia (Saudi Arabia, 2024) include the healthcare goals of corporatisation, expansion of the healthcare system, and improvement of efficiency and value-based healthcare. Saudi Arabia will need to cater to the healthcare needs of the increasing population from the current level of 34.8 million (2020) to increase to 35.3 million in 2021, 37.2 million in 2025 and 39.3 million in 2030, the ending year of Vision 2030 (Worldometer, 2021). To take care of the increasing population, there is a need to have an adequate number of healthcare professionals. Nurses are the largest group in healthcare systems, and this is true in Saudi Arabia, too. WHO prescribes at least 3 nurses per 1000 population. As against this standard, the nursing strength of various countries is compared in Fig 1.

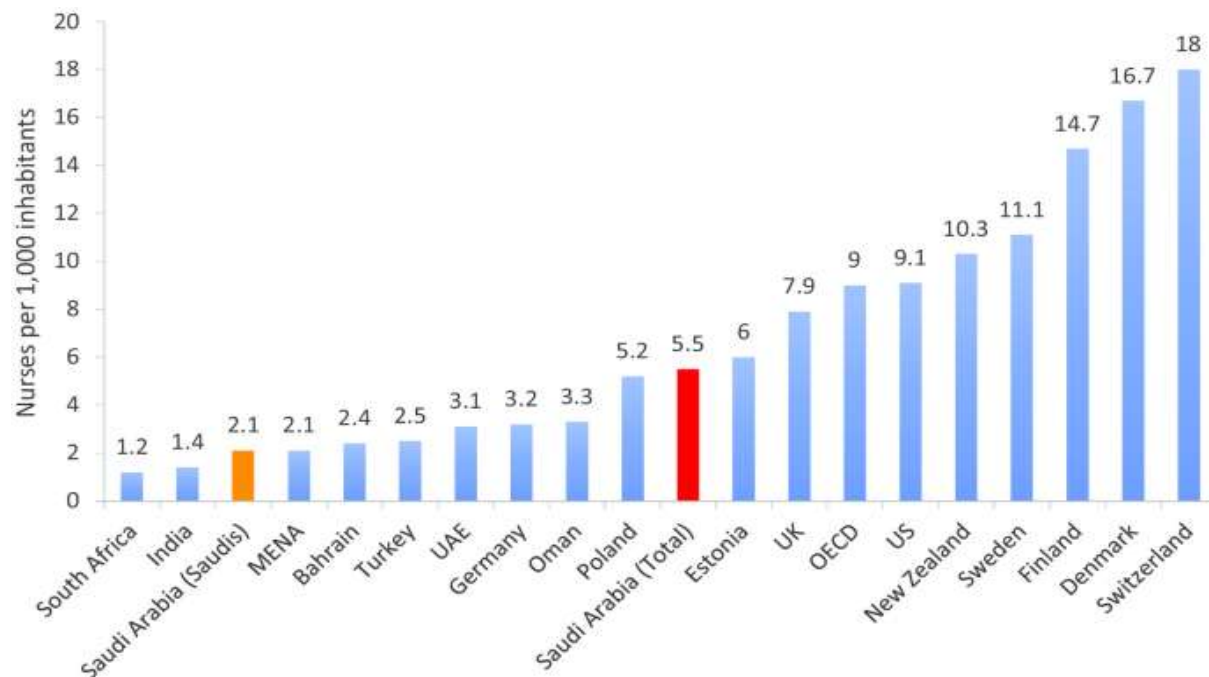


Figure 1 Relative nursing strengths in different countries as nurses per 1000 population (Alluhidan, et al., Challenges and policy opportunities in nursing in Saudi Arabia, 2020).

According to (Alluhidan, et al., Challenges and policy opportunities in nursing in Saudi Arabia, 2020), there were 184565 nurses in Saudi Arabia, of which 70319 (38%) were Saudi nurses and the remaining expatriates from various countries. Among Saudi nurses, 62% were female, and among foreign nurses, 90% were female. Dependence on foreign nurses is highly risky as these nurses may return to their home countries at any time when the economic and policy conditions of their home countries become favourable. The total cost of foreign nurses is also higher than that of Saudi nurses, especially due to their low retention and high turnover. Increasing the number of Saudi nurses is the only solution to this problem. To do so, there should be a large pool of qualified nurses in the market. However, in Saudi Arabia, only 11 nursing graduates per 100,000 become available each year compared to much higher output in some other countries, as Fig 2 shows. Saudi Arabia has the lowest number of nursing graduates.

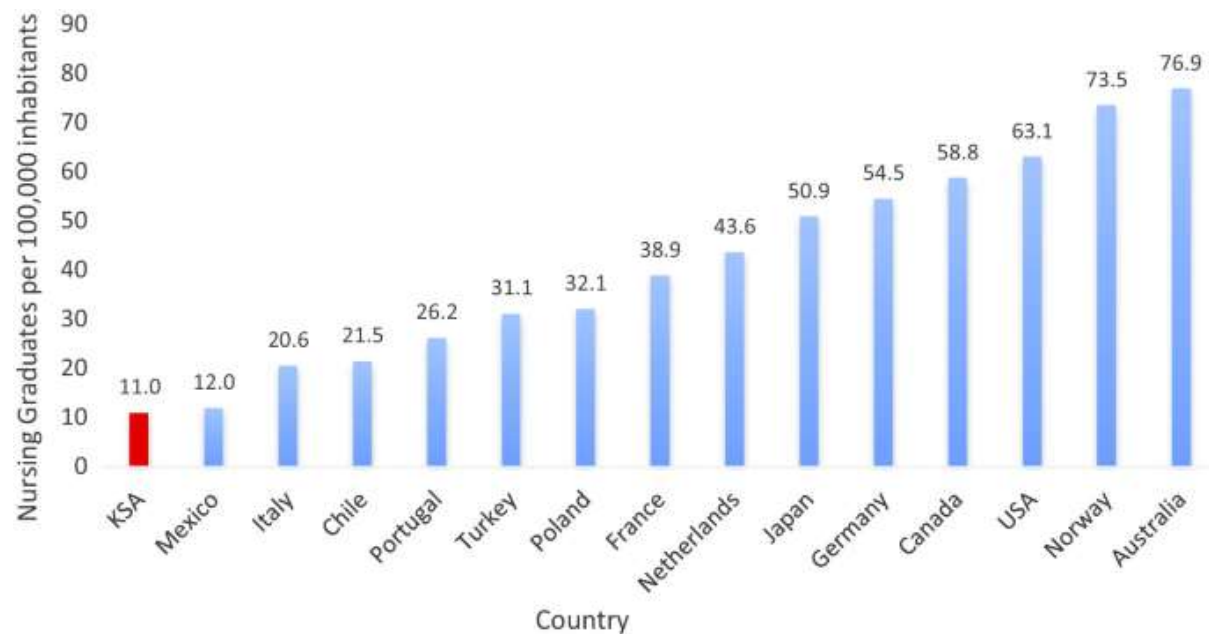


Figure 2 Comparison of nursing graduates per 100,000 people in different countries (Alluhidan, et al., Challenges and policy opportunities in nursing in Saudi Arabia, 2020).

Large-scale dropouts, not willing to join the healthcare system after graduation, the cultural barrier to females opting for nursing jobs, high turnover rates (17-60%) with an average of four years of stay, the difficulty of training men for nursing, loss of diploma nurses (largest in number) from the nursing profession due to the recent Nursing Practice Act categorising such nurses as technicians, which prevent them from direct patient care, lack of skills of Saudi nurses for quality care and institutional and policy deficits are cited as reasons by Alluhidan, et al. (2020) for the current plight of Saudi nursing force.

These issues and problems highlight the need for drastic reforms in matters related to nursing education in Saudi Arabia. This review examines this topic in the following manner-

- 1) Current problems of nursing education in Saudi Arabia
- 2) Institutional and policy deficits concerning Saudi nursing education
- 3) Nursing education during the Covid pandemic in Saudi Arabia
- 4) Solutions to the current problems of nursing education in Saudi Arabia

Methodology & Results

A Google and Google Scholar search was done for relevant papers for each topic. Of the 106 papers identified from this search, after the removal of duplicates (40 papers) and those not particularly useful (42 papers), 24 papers were included for discussions on the above four topics.

Current problems of nursing education in Saudi Arabia

According to Alluhidan et al. (2020), the components of the required reforms are the production of modern, high-quality nursing education to Saudize nursing, standardise and improve the nursing care quality and encourage public and private hospitals to hire and train Saudi nurses. When attempting to increase the number of qualified Saudi nurses, need-based skill development, expansion of nursing education capacity, enhance skills and competence to international levels, removal of cultural barriers and improvement of nursing image, improvement of nursing retention by improving working conditions and remuneration, distribute nursing force equitably across specialisations and regions and regulatory reforms are necessary.

The need to address the future healthcare needs of the specific culture of Saudi Arabia was highlighted by Alluhidan, et al. (2020). Changes to modern lifestyles assisted by technologies have led people to lead more sedentary lives. This has resulted in the increasing prevalence of chronic illnesses like obesity and diabetes for the ageing population. So, nursing education should stress the care of such patients more. Deaths and disabilities due to road accidents have also increased. An increased focus on public health education for nursing students assumes importance in this regard. The authors cite the definition of public health nursing (PHN) by the American Public Health Association (APHA), "the practice of promoting and protecting the health of populations using knowledge from nursing, social, and public health sciences." Thus, nurses also need to study social science. PHNs need to be trained to meet the increasing challenges of chronic illnesses, the ageing population, disabilities, and newly emerging infectious diseases by addressing the socioeconomic and cultural determinants of health to have a greater impact on health and the health of the population. The required curricular changes have been recommended.

Four challenges of nursing education in Saudi Arabia were identified by the interview participants in the studies of Alghamdi, Albloushi, Alzahrani, Aldawsari, and Alyousef (2019) as cultural, educational, organisational (weak nursing authority, lack of acknowledgement for Saudi nurses), and work (poor working environment, language barrier). Saudi nurses face cultural barriers to the need to work with male counterparts, care for male patients and work away from family. Nurses have a poor image in society due to misconceived ideas about the noble profession, leading to family disapproval. There is also inadequate education and practical readiness arising from poor theory—practice relationships. Nursing educators have poor teaching skills due to poor knowledge, poor communication skills, inadequate preparation, and inability to influence students. Teachers have no practical experience as a nurse. The absence of an independent nursing authority in Saudi Arabia is one more organisational weakness. Nurses are not a part of or controlling authorities of organisations related to nursing education. Nursing is not fully acknowledged as a profession. The need to increase the proportion of Saudi nurses for culturally and linguistically appropriate care through the promotion of their education was highlighted by Alsadaan, Jones, Kimpton, and DaCosta (2021). Challenges of nursing shortages, underdeveloped nursing education and unclear scope of practice were identified by Al-Dossary (2018) as the current problems of nursing in Saudi Arabia. Effective strategies to improve nursing education have been suggested to address these problems. Vision 2030 should provide many opportunities to implement these strategies. (Aldossary, While, & Barriball, 2008).

The limitation of the need for today's Saudi nurses to prove that they can work within traditional Islamic

boundaries was highlighted by Al-Khunizi, Al-Otaibi, Al-Anazi, Bashatah, and Wajid (2021) as a problem in universalising nursing education and services in the country. Based on an empirical review, Falcó-Pegueroles, Rodríguez-Martín, Ramos-Pozón, and Zuriguel-Pérez (2021) stressed the need to include critical thinking as an integral part of nursing education. Methods to develop critical thinking suggested were formal and informal assignments, brief case studies, questions requiring critical thinking for correct answers and dialogues on complex problems in classroom lectures. In Saudi nursing education, this aspect also needs to be incorporated if it has not already been done.

Challenges of clinical nursing teaching were identified, and solutions were suggested by Hamdi, Arishi, and Alghamdi (2021). The challenge was the lack of a coherent theoretical base due to the lack of research in this area affecting clinical teaching effectiveness. The solutions suggested were enhancing the clinical teaching skills of faculty and increasing interactions between learners and teachers. Students' needs, sensitivity and problems need to be considered when interactions are being developed.

According to Brinjee, Al Thobaity, Al Ahmari, and Almalki (2021), disaster nursing in Saudi Arabia currently lacks disaster simulations, formal education related to disaster management, and educational resources providing up-to-date research about disaster nursing. Development of disaster nursing curricula at all levels and appropriate simulation scenarios have been suggested as solutions. This finding might have a bearing on the nursing issues faced in Saudi Arabia during the current COVID pandemic, being reviewed in another section below.

Although both British and Saudi nurses identified the need to acquire assertive communication skills and were trained in this skill during their nursing education, both categories of nurses failed to recognise the operational skills required to convert this knowledge into practice. This means education and training were not matched by the elimination of implicit sanctions against speaking up in educational and workplace settings. These sanctions were related to three themes which emerged from the interview responses: drivers for speaking up, the pedagogical context of speaking up and ways of building self-confidence. This demonstrates the need to pay attention to this aspect in nursing education curricula (Mansour, Jamama, Al-Madani, Mattukoyya, & Al-Anati, 2020).

It was noted by Alsufyani, Alforihidi, Almalki, and Aljuaid (2020) that the demand for nurses will more than double in 2030 from its 2016 strength as the population increases as per projections (see Introduction section). This means an additional demand for about 150000 nurses by 2030. This works out to 10000 nursing graduates coming out of universities every year if no dependence on expatriate nurses is to be achieved. However, the current nursing status contradicts these requirements and the goal of achieving gold standards of nursing practice in Vision 2030. The strategy of MOH to increase the enrolment of students who were denied admission into other courses due to low OGPA in nursing education may not produce adequately skilled and competent nurses. Increasing the number of nursing scholarships (rather than enrolling students of poor merit) enhancement the attractiveness and reputation of the nursing profession by nursing educators through campaigns and high-quality curricula incorporating problem-based learning and critical thinking and assertive communication skills are required to address the nursing shortage using nursing education as the platform.

The lack of programmes to impart technological literacy in the Saudi nursing education system was pointed out by Nes, et al. (2021) in a scoping review, in which some Saudi studies were also included. Technological literacy is an essential requirement as modern technologies are used in healthcare to improve care quality and critical thinking. Hence, Saudi universities need to develop appropriate programmes to impart this skill to their nursing students.

Institutional and policy deficits concerning Saudi nursing education

Some institutional and policy deficits have been mentioned in the above section. Deficits in education and training in evidence-based practice were identified as institutional barriers by Jabonete and Roxas (2022) in a systematic review of papers published from 2002 to 2021. These findings show that nursing educators should use research findings in teaching their subjects along with teaching principles and practices of evidence-based practices. This will prepare future nurses with sufficient knowledge to locate, evaluate and apply research evidence to improve patient care. Deficits in nursing education curricula for evidence-based practice are affecting the skills and competencies of practising nurses, according to the findings of (Alblooshi, et al., 2022).

Faulty HRD policies and regulations have been causing serious problems in nursing education in Saudi Arabia, according to a critical review of the healthcare HRD policies given Vision 2030 goals by Al-Hanawi, Khan, and Al-Borie (2019). Saudization and Nitaqat need to be strong components of these policies so that more opportunities will be available for Saudi nurses, which will trigger increasing enrolment in nursing education.

Although the Scientific Nursing Board (SNB) is organising training programmes for registration and renewal, this has not been available in rural and remote areas. SNB is fully dependent on SCFHS managerially, financially, and technically, which affects the development of nursing education and profession in Saudi Arabia. There is an inadequate global partnership between Saudi nurses and their colleagues around the world. Such networks will improve their knowledge about the latest trends in the profession, which can be passed on to nursing education (Alsadaan, Jones, Kimpton, & DaCosta, 2021).

A policy deficit in providing a richer and more nuanced nursing education in ethics and the rights of mental healthcare patients was identified, and the need for addressing this issue was stressed by Al Mousa, Callaghan, Michail, and Caswell (2021). The privatisation policy of the Saudi government was criticised. To address the growing need for nurses, the government is implementing the privatisation of nursing education. This will increase the costs of education, and the public sector will slowly lose its relevance in nursing education. So, while privatisation is encouraged, the prime place of the public sector in nursing education needs to be maintained.

Few papers specifically point to institutional or policy deficits in Saudi nursing education. The deficits identified above are indirectly derived from the findings. We move to the next topic now.

Nursing education during the Covid pandemic in Saudi Arabia

The Covid pandemic has necessitated online mode of education in all fields and nursing education is no exception. An online survey of Saudi nursing students by Alqahtani, Innab, and Bahari (2021) revealed that previous online experience and readiness to learn positively influenced their overall satisfaction with e-learning and assessment. Readiness for e-learning was associated with satisfaction with teaching and generic skills and learning experiences.

The need to provide training programmes to support Saudi nurses in handling COVID infections more effectively was highlighted by Al-Dossary, et al. (2020). Lack of guidance from the healthcare team and lack of information affected the knowledge of Saudi nurses about covid pandemic and care requirements, as was reported by Inocian, et al. (2021). This finding also supports the need for training and mentoring programmes on evidence-based practices, care inclination and compassionate behaviour related to COVID-19. The relationship between emotional intelligence and e-learning satisfaction of Saudi nursing students during the pandemic demonstrates the possibility of focusing on emotional intelligence in their educational programmes to provide a supportive environment to reduce uncertainty among these students during this Covid period (Hussien, Elkayal, & Shahin, 2020).

An educational intervention using the Health Belief Model (HBM) was experimentally tested by Elgzar, Al-Qahtani, Elfeki, and Ibrahim (2020) to evaluate its effectiveness in increasing the awareness and health beliefs of Saudi nursing students. HBM assumes that the participation of individuals in the prevention, early detection, and treatment measures of any specific health problem depends on their perception their own risk of exposure even if they do not suffer from symptoms (perceived susceptibility); they understand the significance and seriousness of the problem (perceived severity), believe in the benefits of recommended preventive measures (perceived benefits) and benefits are higher than expected barriers of preventive measures (perceived barriers) and have self-efficacy to adopt a healthy lifestyle to support protective behaviours. Also, internal cues, such as the history of the disease and external cues, such as the media and health team intervention, can increase engagement in protective behaviours. A significant relationship was obtained for HBM constructs with awareness regarding COVID-19 and their perceived susceptibility, severity, and benefits in terms of importance in learning about it. It also increased their self-efficacy in overcoming perceived barriers and adopting protective and preventive actions while dealing with COVID-19.

Positive findings from the survey results of Saudi nursing students from seven universities on the awareness, perception and knowledge and prevention methods of COVID-19 were used by Albaqawi, et al. (2020) to develop an educational campaign to improve nursing students' knowledge of and preventive behaviour against COVID-19. This knowledge and precise preventive behaviour will equip them for future pandemics of a similar nature. In nursing education, knowledge of the transmission mechanism of COVID-19 and other pandemics can be included. Some preventive measures like washing hands and disinfection of surrounding areas also need to be taught well.

Saudi nursing interns focused more on their psychological well-being and social relationships and less on physical and environmental domains during their internship programme in the hospitals. They felt safer in the hospital environment and felt less energetic during that time (Grande, Butcon, Indonto, Villacorte, & Berdida, 2021). The findings suggest the need for hospital management to take steps to reduce the anxiety and uncertainty among nursing interns by informing them of updated knowledge on the pandemic situation and effective prevention methods.

In a survey study using a large sample across 10 Saudi universities, Alshehry, et al. (2021) found that about 56% of Saudi nursing students were prepared to be vaccinated against COVID-19, 18% did not want to be vaccinated, and the remaining 23% were unsure due to varying levels of anxiety, fear, and risk perceptions. Reasons for their attitude towards vaccination were related to concerns about the vaccine's safety, side effects, effectiveness, price, the reliability of the clinical trials on efficacy and the belief that the vaccine does not stop infection. Since their education may be affected if they get infected, all of them need to be vaccinated. Further, if nurses are confused, the public will also be uninterested in vaccination. This will affect the government's containment and prevention efforts. Hence, the universities need to develop educational programs to improve vaccination literacy and beliefs and attitudes towards the COVID-19 vaccine among nursing students.

From the above sections, some ideas on the current problems, institutional and policy deficits, and the impact of COVID-19 on nursing education have been obtained. Since some serious problems have been identified, we must also look for solutions. The next section deals with this topic.

Solutions to the current problems of nursing education in Saudi Arabia

The findings themselves indicate the solutions required. Some authors have also discussed or suggested solutions. To what extent these solutions can be implemented in the country depends on the political and cultural environment, the international environment and the will and commitment of all concerned.

The possible solutions are listed below.

- 1) The different laws, rules and regulations need to be reviewed for modification or renewal to fit with the currently developing situations and future needs, especially to facilitate the achievement of Vision 2030 goals.
- 2) Saudization and Nitaqat are good strategies to ensure the cultural correspondence of the nursing workforce with the healthcare system of the country. However, where necessary, till the complete replacement of expatriates is achieved, the currently working expatriates need to be provided with a good working environment and remuneration to retain them.
- 3) Privatisation of nursing education should not be at the cost of the public system losing its relevance.
- 4) There are too many authorities to regulate the nursing profession and education, with none of them involving nursing experts at the decision-making levels. The multiplicity of agencies creates confusion and thus delays and ineffective implementation of policies and strategies. There should be only one agency to regulate nursing education, headed and with the majority of members from nursing experts.
- 5) Some deficits in nursing curricula like teaching them evidence-based practice, problem-solving, critical thinking skills and vaccination literacy have been observed. These deficits need to be rectified.
- 6) There should be continuous review and updating of laws, regulations, rules, policies, and strategies to ensure that the progress in nursing education is on target to achieve the desired level of Saudi nursing workforce at each stage.

Discussion & Conclusions

Discussion

The evolution of nursing education in Saudi Arabia over the past seven decades marks significant progress, yet numerous challenges persist, particularly in the context of Saudi Vision 2030. Despite the establishment of comprehensive educational programs at various levels and significant enrolment in nursing colleges, the sector faces issues such as a high dependency on expatriate nurses, low graduation rates, and a plethora of cultural and institutional barriers.

A substantial dependence on foreign nurses, accounting for 62% of the workforce, poses a significant risk due to their potential return to home countries under favourable conditions. This necessitates an increase in the number of Saudi nurses to ensure a stable and culturally aligned workforce. However, the output of Saudi nursing graduates remains alarmingly low, with only 11 per 100,000 population, far beneath the norms observed in other countries. Cultural barriers, particularly for female nurses, and a high turnover rate among Saudi nurses further exacerbate these issues.

Institutional and policy deficits add to the complexity. The existing regulatory framework is characterised by multiple overlapping authorities, leading to inefficiencies and delays. The lack of standardised training in evidence-based practice and technological literacy, alongside an inadequate curricular focus on critical thinking and problem-solving skills, undermines the quality of nursing education. Furthermore, the policies aimed at Saudization and Nitaqat require stronger implementation to create more opportunities for Saudi nationals in the nursing profession.

The COVID-19 pandemic has underscored the necessity for robust online education systems and has revealed a positive yet anxious response from nursing students towards e-learning. However, the pandemic has also highlighted gaps in emotional well-being and vaccine literacy among nursing students, indicating areas that require immediate attention.

To address these multifaceted challenges, a thorough review and update of the existing laws, regulations, and policies are imperative to align them with current and future needs. A singular regulatory authority with a majority of members being nursing experts could streamline the governance of nursing education. Enhancement of the nursing curriculum to include evidence-based practice, problem-solving, critical thinking, and technological literacy is essential. Additionally, improving the attractiveness of the nursing profession through better working conditions and remuneration, alongside broadening educational campaigns to boost nursing's image, are strategic measures to bolster the local nursing workforce.

Conclusions

This qualitative review helped to identify some problems and challenges of nursing education in Saudi Arabia. Some institutional and policy deficits have contributed to these problems, as have been identified by some researchers. The COVID-19 pandemic has enforced online education for nursing students. They have understood its need and have a positive attitude towards it. However, other problems like negative psychological well-being contributed by anxiety, risk perception, uncertainty and fear have also been identified among nursing students and interns. Although positive perceptions about patient care elements for COVID-19 exist among nursing students, these have not been translated to the same feeling about their vaccination against COVID-19.

Based on the findings and suggestions in the reviewed literature, some solutions have been offered on all the important aspects related to nursing education in Saudi Arabia.

One of the limitations of this research is that there are many other aspects related to nursing education in Saudi Arabia. This work focused on only four of them, on the basis of their perceived importance.

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