

# The Impact of Nursing Professionals on Public Health Awareness and Patient Education in Saudi Arabia

**Majed Muiddh Alotaibi<sup>1</sup> Awad Moed Abdullah Alalyani<sup>2</sup> Muteb Abdullah Aljuaid<sup>3</sup> Abdulrhman Ibrahim I Alkhalf <sup>4</sup> Karim Suliman Awdah Alatawi <sup>5</sup> Sultan Eid Alotaibi<sup>6</sup> Saud Saeed Alotaibi<sup>7</sup> Jahez Zidan Alenizy<sup>8</sup> Almutairi, Bassam Khualif B<sup>1</sup>**

<sup>1</sup> Senior Specialist-Nursing, King Faisal Medical Complex (KFMC), Ta'if

<sup>2</sup> Senior Specialist-Nursing, Sabt Al alya Hospital

<sup>3</sup>Nursing specialist, King Faisal medical complex (KFMC) Ta'if

<sup>4</sup> Senior Specialist-Nursing, General Directorate of Health Affairs in Riyadh

<sup>5</sup> Senior Specialist-Nursing, Tabuk Health Cluster

<sup>6</sup> Senior Specialist-Nursing, Executive management of health care centers, Riyadh

<sup>7</sup> Nursing Specialist, Laban Al Sharqi Health Center

<sup>8</sup> Senior Specialist-Nursing, Prince Abdul Mohsen Hospital

## ABSTRACT

**Introduction:** Due to the growing prevalence of chronic diseases and the recent development of the health care system in Saudi Arabia, nursing professional has emerged as an important source of public awareness and patient education.

**Aim of work:** To explore the multifaceted roles of nurses in improving public health awareness and patient education in the Kingdom of Saudi Arabia (KSA).

**Methods:** We conducted a comprehensive search in the MEDLINE database's electronic literature using the following search terms: Impact, Nursing, Professionals, Public Health, Awareness, Patient Education, and Saudi Arabia. The search was restricted to publications from 2016 to 2024 in order to locate relevant content. We performed a search on Google Scholar to locate and examine academic papers that pertain to my subject matter. The selection of articles was impacted by certain criteria for inclusion.

**Results:** The publications analyzed in this study encompassed from 2016 to 2024. The study was structured into various sections with specific headings in the discussion section.

**Conclusion:** Nursing professionals in Saudi Arabia play prestigious roles towards the development of the nation's health cares in the area of health promotion and counseling. Thus the health challenges faced in Saudi Arabia can be effectively tackled and since the health workers are strategically placed within the health care system of Saudi Arabia the country can achieve its Vision 2030 in terms of population Health by promoting informed society. Further commitment to financing the expansion of nursing education, recruitment of personnel and change in policy is required for a complete realization.

**Keywords:** Impact, Nursing, Professionals, Public Health, Awareness, Patient Education, Saudi Arabia

## INTRODUCTION

Given that nursing professors pursue leadership positions in academics and practice and given the massive healthcare reforms underway in Saudi Arabia in line with its Vision 2030 framework, Saudi nursing professionals stand in a prominent position to position the nation and raise the awareness of healthcare and patient education among the population. These reforms promote formation of sound health system, disease prevention and health promotion which nursing play a crucial role (Shareifi et al., 2024).

Saudi Arabia's healthcare landscape is marked by a dual challenge: an increase in the rate of chronic diseases including diabetes and cardiovascular disorders and a shifting population in need of culturally appropriate interventions (Mani & Goniewicz, 2024). The rationale that can be given is that nurses, who constitute a significant part of the healthcare personnel, have the role-opportunity to fill the gaps in health literacy and prevent practices. They play the dual role of care givers as well as teach patients about their diseases and ensure that they make right choices for leading a healthy life. This dual role is necessary because the country has a high prevalence of chronic diseases and lifestyle diseases such as obesity and lack of exercise (Mani et al., 2024).

Nevertheless, nurses in Saudi Arabia have been very critical in the provision of health care, but they are faced with some system hindrances that limit them in discharging their professional duties in public health education. For example, the country has focused extensively on the hospital referral system while pursuing a minimal expenditure strategy on the initial level healthcare facilities and centers. Such focus restricts the chances of nurses to participate in community related public health programs. In addition, employment of expatriate nurses augments cultural and linguistic differences that may become a limitation in patient communication, which increases the necessity for specific education actions to facilitate their acculturation (Alghamdi et al., 2019).

Measures towards resolving these challenges include the expansion of funding on nursing education and training. Community health nursing and public health strategies are given importance in Saudi nursing programs so that nursing graduates and practitioners have the knowledge and skills required to steer health promotion activities. Furthermore, specific governmental measures like Saudization, which was launched to increase the presence of Saudi citizens in nursing, is beneficial for a culturally sensitive approach to patient's educational process (Alomrani, 2021).

Therefore, nursing professionals in Saudi Arabia play a crucial role in enhancing the well-being of the country's population. They cannot be overemphasized given the escalating challenges emanating from rising chronic illnesses and rapidly changing health care systems in the country. Through the elimination of such barriers, the government through education and policy changes can ensure that the nurses deliver their best in making Saudi Arabia a healthier nation (Alluhidan et al., 2020).

## **AIM OF WORK**

To explore the multifaceted roles of nurses in improving public health awareness and patient education in Saudi Arabia. This study addresses their contributions within healthcare institutions, their community outreach efforts, and their participation in public health campaigns. The essay also highlights the challenges and opportunities presented by cultural, systemic, and professional factors.

## **METHODS**

A thorough search was carried out on well-known scientific platforms like Google Scholar and Pubmed, utilizing targeted keywords such as Impact, Nursing, Professionals, Public Health, Awareness, Patient Education, and Saudi Arabia. The goal was to collect all pertinent research papers. Articles were chosen according to certain criteria. Upon conducting a comprehensive analysis of the abstracts and notable titles of each publication, we eliminated case reports, duplicate articles, and publications without full information. The reviews included in this research were published from 2016 to 2024.

## **RESULTS**

The current investigation concentrated on the multifaceted roles of nurses in improving public health awareness and patient education in KSA between 2016 and 2024. As a result, the review was published under many headlines in the discussion area, including: The Evolving Role of Nurses in Saudi Arabia. The Role of Nursing Professionals in Public Health Awareness, Patient Education and Its Importance, Challenges Faced by Nurses in Public Health and Education Roles

## **DISCUSSION**

Currently, Saudi Arabian healthcare is at the crossroads of an evolution, Alanazi notes about the Kingdom's Vision 2030 (Alanazi, 2024). Closely associated with this process is the limited human resource of nursing professionals who make up the bulk of the workforce in the health sector. Obviously, their responsibilities concern health promotion, disease prevention as well as patient counseling. Saudi nurses are in a position to mediate between advanced medical knowledge and specific local cultures and healthcare wants (Al Yami et al., 2023). This essay discusses on the important contribution of nurses in health promotion as well as counseling in Saudi Arabia. Clinical and community aspects are outlined while their effectiveness, role of cultural influences and limitations and ways to improve them in this regard are also considered.

### **1. The Evolving Role of Nurses in Saudi Arabia**

#### **1.1 Historical Context and Workforce Development**

Saudi nursing developed dynamically right after the creation of the Ministry of Health (MOH) in 1950. In the beginning, several facilities were limited to provide the required standard healthcare mainly due to nurses being imported from other countries. Through the seventies and eighties the Kingdom supported investments in

health care facilities and training for nurses. The developments of colleges and universities that offered specialized nursing programs also led to a decisive change that allowed for the growth of the number of employed domestic nurses (Aljohani, 2020).

## **1.2 Vision 2030 and Public Health Goals**

The Visions 2030 presents on enhancing health care System and populace health wellbeing. Community nurses are instrumental in the achievement of these objectives through community mobilization, providing the necessary health education on Non-Communicable Diseases, patient counseling and promotion of preventive health. Their work is commensurate with the Vision of improving standards and duration of living, along with efficiency of healthcare (Chowdhury et al., 2021).

## **2. The Role of Nursing Professionals in Public Health Awareness**

It is important to maintain health promotion and prevent diseases especially in an evolving nation like Saudi Arabia by creating consciousness among the public. With a shift in healthcare delivery to deal with non-communicable diseases, mental health, and the management of communicable diseases, the work of raising awareness by nursing professionals has become extremely essential (Alkhamis & Miraj, 2021). This section explores how Saudi nurses serve as agents of change in increasing awareness about the community health and diseases, specifically as it concerns community mobilization, health promotion, and health, and other stakeholders.

### **2.1 Public Health Awareness in the Saudi Context**

Health promotion is a key part of public health educating people and communities to improve physical and/or mental health, prevent various diseases, and improve their quality of life. This means that in Saudi Arabia this takes an additional dimension given the cultural characteristics for instance; the KSA society in this regard is culturally and religiously sensitive in embracing this policy because of high incidence of obesity and diabetes, for instance. It has recently been revealed that the MOH in Saudi Arabia estimated that about 17% of the adult population in the KSA suffers from diabetes. They have a vast responsibility in increasing awareness about such vital issues and functioning as intermediaries between health care facilities and the public (Aldossari, M. 2019).

### **2.2 Contributions of Nurses to Public Health Awareness**

Nurses in Saudi Arabia contribute to public health awareness in diverse ways (Al Khomsan et al., 2023), including:

### 2.2.1 Community-Based Interventions

Nurses often educate and promote preventive services to the community directly. Such programs are more relevant in areas with poor or scarce access to health care services especially in rural settings (Al Khomsan et al., 2023).

- **Health Screenings:** Nurses are sometimes at the forefront of calling for regular checkup for illnesses such as hypertension and diabetes in various centers such as the community and Mosques (Sultan et al., 2020).
- **Maternal and Child Health Education:** To provide proper knowledge about prenatal and postnatal care, nutrition and breastfeeding practices maternal health nurses enhance both the quality of life of the mothers and the babies (Sultan et al., 2020).

### 2.2.2 Participation in Public Health Campaigns

Independent and government health campaign that is in place to address public health literacy and priorities involve nurses (Al-Hazzaa & AlMarzooqi, 2018). Examples include:

- **Breast Cancer Awareness:** The national campaigns during October include that nurses holding seminars, providing educational material, and advocating for early detection (Aldakhil, 2023).
- **Immunization Drives:** Nurses also partner with the MOH to enhance immunization rates especially during immunization activities such as the World immunization week.

### 2.2.3 Promoting Healthy Lifestyles

Saudi nurses are at the forefront of health promotion to reduce risks factors which include; obesity, smoking, and physical inactivity (Alahmed & Lobelo, 2017).

- **Workshops and Seminars:** Nurses in particular deliver educational sessions on diet, physical activity, and stress in schools, tertiary institutions, and employers' places of work.
- **Role Modeling:** More importantly, nurses modeling health-engaging behaviors motivate individuals to change their lifestyle.

## 2.3 Case Studies and Success Stories

Several initiatives in Saudi Arabia demonstrate the profound impact of nurses on public health awareness:

- **Breast Cancer Early Detection Program:** In fact, frequent awareness campaigns have been levied through nurses in primary

health care centers (PHCs). These programs indicate that through community-based education sessions, mammography has been enhanced for women of the ages 40 and above (Sacgaca et al., 2024).

- **Diabetes Awareness Campaigns:** The “Diabetes Control Program” organized by the MOH uses nursing professionals to inform communities regarding the role of consistent glucose checks and the means of using appropriate nutrition. Nurses also teach about this and how to use insulin and manage the complications that come with diabetes effectively (Alruily et al., 2024).
- **COVID-19 Public Awareness:** Saudi nurses have significantly contributed to increasing COVID-19 precaution measures while in the course of this study. To a good extent, they roses to the cause and helped the Kingdom in preventing the spread of the virus (Al-Dossary et al., 2020).

## 2.4 Challenges in Raising Public Health Awareness

Despite their significant contributions, nurses in Saudi Arabia face several challenges when engaging in public health awareness efforts (Al Khomsan et al., 2023):

- **Cultural Sensitivities:** Some topics regarding health may be frowned upon because they are culturally sensitive that is why conversations regarding, for instance, mental health or sexual health, may be problematic.
- **Workforce Shortages:** As the need for public health increased, there may be few prospects of trained nursing personnel available in the market.
- **Training Gaps:** Most of the nurses have poor training on public health communication this reduces their efficiency when conveying messages.

## 2.5 Opportunities for Enhancing Nursing Contributions

Addressing these challenges can enhance the effectiveness of nurses in public health awareness (Alluhidan et al., 2020):

- **Targeted Training Programs:** These include trainings in public health promotion and also offering certifications in health communication.
- **Collaborative Campaigns:** The use of community health workers in form of religious leaders and other influential figures in the society such that nurses’ deployment these influences to address cultural taboos while passing health literacy.
- **Technology Integration:** Exploiting the new opportunities of tele-health technologies and utilizing social networks to address a younger generation as well.

### 3. Patient Education and Its Importance

#### 3.1 Understanding Patient Education in Saudi Arabia

Patient education is the process through which the patient receives information or skills from the health care provider concerning his or her wellbeing. Patient education is important in KSA because the prevalence of chronic illness is increasing including diabetes, cardiovascular diseases, and obesity. The nature of Saudi Arabia's culture and social system also requires individualized education strategies because patients' health models are molded by cultural and religious expectations (Alduraywish et al., 2020).

MOH has placed patient education amongst its key Health priorities for the kingdom of Saudi Arabia and under its Vision 2030 as promotion of preventive health and self-care study (Alotaibi et al., 2022). More importantly, nurses, being the most populous of the health care profession, are also professionals who work tirelessly in these areas of capacity as educators, change agents/advocates.

#### 3.2 Contributions of Nurses to Patient Education

Patient education in Saudi Arabia is in the best hands of nurses since they are constantly and directly in touch with the patients within the settings (Shareifi et al., 2024). Their contributions to patient education include:

- **Providing Tailored Health Information:** Registered nurses identify patients need, cultural sensitivity, and literacy level to provide patient specific education. For instance, a nurse, teaching the diabetic patient what to eat may think about the type of food the patient prefers and what is most commonly available locally (Alqahtani, 2024).
- **Enhancing Treatment Adherence:** During consultation and teaching, the nurses inform individuals with chronic diseases, effects of their conditions, the use of medication and other necessary behavioral alterations. Research performed in Saudi Arabia indicates that education provided by nurses increases the level of compliance with the prescribed therapy plans in patients with chronic diseases (Alhabib et al., 2022).
- **Promoting Preventive Health Behaviors:** Learners understand that prevention measures including vaccination, proper diet, and exercise to enable clients avoid chronic diseases. For instance in health promotion crusade, nurses play major role to educate people regarding flu immunization and its necessity during different seasons (Shamlan et al., 2023).

#### 3.3 Methods and Strategies for Effective Patient Education

Nurses employ diverse methods to educate patients, adapting their approaches based on the audience and context:

- **One-on-One Counseling:** Attending communication is carried out through face-to-face sessions where nurses ensure that patients receive the relevant information on their own specific medical conditions of concern to each of them. For instance, a nurse might teach a patient with hypertension about how to check blood pressure, avoid using salt and how to tackle stress (Al Rebeh, 2018).
- **Group Education Sessions:** In group sessions or workshops, nurses are able to extend their contact to a number of individuals out at once. Exemplary issues include diabetes management, prenatal, as well as tobacco controlling. Group sessions are also effective in encouraging peer support, which makes patients adhere to change in behaviors (Al Rebeh, 2018).
- **Use of Technology:** Social networks and application software is more actively incorporated by nurses in order to boost patient awareness. In KSA, antecedent applications such as Sehhaty give the patient an opportunity to access medical knowledge and even get a remote consultation. These resources are often used by nurses as to how to approach the patients with them effectively (Alrashidi et al., 2022).
- **Visual and Cultural Translation:** Because of the variation in the health literacy level of the Saudi society, the nurses rely on things such as visuals, videos and culturally appropriate printed materials to pass across the message that is contained in a complex health information. For instance, the presentation of surgical procedures or effects of certain lifestyle behaviors on chronic diseases and others through diagrams will help in understanding these much better (Alqahtani, 2024).

#### 4. Challenges Faced by Nurses in Public Health and Education Roles

Nurses in the Kingdom of Saudi Arabia are mostly involved in the improvement of people's health and patient awareness but are faced by several barriers. These challenges are anchored on cultural, system, and/or professional aspects that are peculiar to Kingdom's healthcare system. Knowledge of these obstacles is crucial to enhance the nurses' ability of carrying out their intended roles and support the Kingdom of Saudi Arabia Vision 2030 in healthcare sector (Alluhidan et al., 2022).

##### 4.1 Cultural and Social Challenges

- Gender Norms and Cultural Expectations

Saudi Arabia's cultural norms, deeply rooted in tradition and religion, influence interactions between healthcare professionals and patients. Gender segregation in public spaces and conservative attitudes can limit communication between nurses and patients of the opposite gender, particularly in public health campaigns and patient education sessions. Female nurses, who form a significant portion of the nursing workforce, may face challenges in engaging with male patients (Aldosari, H. 2017).

- Health Beliefs and Practices



Some of this may be tradition--driven or religious in that patients may not accept particular treatment regimens or other advice which is contrary to their beliefs. For instance, use of conventional medicines or shyness in certain health issues, including sexual health or depression, makes it difficult in educating the congregation. Nurses need to tread carefully on these beliefs in the sense that they want to ensure they gain the trust of patients as well as educate them (Elgzar et al., 2020). For these reasons, there is still substantial bias about certain health problems: in advancing public health and patient education, but they encounter numerous challenges that can hinder their effectiveness. These obstacles arise from cultural, systemic, and professional factors unique to the Kingdom's healthcare landscape. Understanding and addressing these challenges are essential to empower nurses to perform their roles effectively and contribute to the Kingdom's Vision 2030 healthcare goals (Alluhidan et al., 2022).

## **4.2 Systemic Challenges**

### **4.2.1 Workforce Shortages**

Although Saudi Arabia has provided a considerable amount of resources for healthcare in recent years, it is still lacking enough qualified nurses to nurse the population which is rapidly increasing. Ministry of Health indicates that the current ratio of nurses to the patient is still below the desirable levels as recommended WHO. Such a shortage results in heavy workloads, which mean that nurses have little time to devote to such projects as campaigning for public health or raising awareness of various illnesses (Al-Hanawi et al., 2019).

### **4.2.2 Limited Integration of Public Health in Nursing Roles**

Globally, among care professions, nurses understand themselves mostly in terms of direct improper care attendants. They either are not included in their job description or their duties are not supported sufficiently by health care institutions in order for them to engage in such crucial activities of public health education and promotion (Owilli, A. O. 2019).

### **4.2.3 Inadequate Professional Development**

Although the education of nurses in Saudi Arabia has been developed over the recent past, there is still a shortage of training relevant to public health and patient education. Public health education at the patient level is bereft since many nurses are not trained in health communication, cultural competence and community engagement (Al-Dossary, 2018).

## **4.3 Professional and Organizational Challenges**

### **4.3.1 Perception of Nursing as a Profession**

Nursing in Saudi Arabia especially in the past has been viewed as subservient to or less important to that of physicians. This perception can threaten the directing authority of nurses in a public health concern, or in patient education programs. Some of the patients and even some other healthcare colleagues may not appreciate the accomplishments of nurses in the domains as described by

Alshammari (2024).

### **4.3.2 Limited Autonomy in Decision-Making**

Nurses in Saudi Arabia practice in systems organized hierarchically that suppress their decision-making abilities. They may not have the permission to start or direct the public health marketing campaigns without permission from the physicians or administrators and as a result affect their performance (Al-Otaibi et al., 2024).

### **4.3.3 Language Barriers**

Currently most of the workforce of nurses is of expatriate origin, which raises concerns as the patients often have to deal with professionals with whom they cannot communicate fluently because of the difference in language. Lack of understanding may keep public health messages and patient education less effective, especially in such far away areas where illiteracy level may be low (Alahmmari et al. 2016).

## **4.4 Technological and Logistical Challenges**

### **4.4.1 Limited Access to Technology**

While Saudi Arabia is progressing well toward the adoption of digital transformation in the healthcare sector, not all the healthcare facilities or communities are empowered by technology up to an equal level. The lack of internet-based services or inadequate Internet access in remote or low-resource practice settings may also be an obstacle for nursing to promote tele-health or digital platforms to increase public health literacy (Alghamdi et al., 2022).

### **4.4.2 Over-reliance on Urban Centers**

Specific preventive measures and assets comprehensively targeted may be provided primarily in urban settings, but not in rural and remote areas. These nurses can encounter service delivery barriers including transport or finances that hamper them from assessing and educating these populations (Alghamdi et al., 2022).

## **4.5 Psychological and Emotional Challenges**

### **4.5.1 Burnout and Stress**

Nurses experience burnout due to work stress, emotional stress and the pressure of delivering on public health targets. This is perhaps most noticeable during outbreaks, as with COVID-19, making nurses not only clinicians but educators to the public as well. It will lower the motivated and the effectiveness of the human body in public health duties (Chetty, K. 2021).

### **4.5.2 Balancing Multiple Roles**

A nurse has to perform clinical and public health and education duties most of time. As these multiple responsibilities can be overwhelming, accomplishing them can be quite difficult particularly in LMICs where nurses offer both curative services

ahead of preventive procedures (Alghamdi et al., 2019).

#### 4.6 Strategies to Overcome Challenges

Addressing these challenges requires a multi-faceted approach that includes:

1. **Cultural Sensitivity Training:** Offering education from cultural aspects for gender norms, health beliefs, and other stigmatized issues to the trained nurses (Alsadaan et al., 2021).
2. **Workforce Development:** Expanding the density of nursing staff to improve patients' care, the quality of practices, and actual employment of newly recruited nurses and, especially Saudi citizens (Alsadaan et al., 2021).
3. **Professional Empowerment:** Many policy changes needed for the recognition and support of the nurse's position in public health, increased independence, and leadership (Alsadaan et al., 2021).
4. **Technology Integration:** Adoption and use of technology such as tele-health and use of digital tools in rural and other remote areas in order to assist the nurses to educate through online platforms (Alsadaan et al., 2021).
5. **Community Engagement:** Assisting nurses to target the community leaders and organizations so as to create their trust towards reaching all the community health goals (Alsadaan et al., 2021).
6. **Addressing Burnout:** Incentivizing measures like flexible work schedules, promotion of psychological well-being among nurses, and discouraging 'nurse burnout' as well as 'nurse stress' are some of the measures provide by Alsadaan et al. (2021).

#### CONCLUSION

The nursing profession in Saudi Arabia involves mostly handling and coming up with awareness and patient education initiatives. Employed in hospitals, communities and schools they play an active role in promotion of healthy lifestyles and reduction of incidence of diseases. It was found that, there is a complex antecedent of barriers, which are influencing the practice of nurses in public health and education sectors in Saudi Arabia due to cultural, systemic, and professionalism barriers. When these barriers are removed, and nurses are equipped with what they need to make the change, they have the capacity to improve the health of a nation. This is important for Vision 2030 health goals, and enhancing the general health status of the Kingdom.

#### REFERENCES

- Al Khomsan, M. S. S., Almansour, H. A. H., Aljarah, M. A. H., Al Faraj, M. A. M., Aldaghman, S. D. H., Alqahtani, N. M. A., ... & Alrubua, A. M. A. (2023). The Role Of Nurses In Promoting Public Health Awareness. *Journal of Namibian Studies: History Politics Culture*, 36, 2126-2135.
- Al Rebeh, A. M. (2018). The effectiveness of a" patient discharge information" booklet in patient education programs in Saudi Arabia.
- AL YAMI, A. S. S., AL HAWKASH, M. H. B. M., AL YAMI, M. S. B. S., AL SHAHI, A. M. H., AL SEDRAN, I. R. M., AL DASHEL, H. Y. A., ... & ALSUNAIDI, M. J. (2023). Disaster Preparedness

Majed Muidh Alotaibi, Awad Moed Abdullah Alalyani, Muteb Abdullah Aljuaid, Abdulrhman Ibrahim I Alkhalf, Karim Suliman Awdah Alatawi, Sultan Eid Alotaibi, Saud Saeed Alotaibi, Jahez Zidan Alenizy, Almutairi, Bassam Khualif B,

And Response: The Crucial Role Of Doctor And Nurse In Protecting Community Health. *Journal of Namibian Studies: History Politics Culture*, 36, 110-121.

- Alahmed, Z., & Lobelo, F. (2017). Physical activity promotion in Saudi Arabia: A critical role for clinicians and the health care system. *Journal of epidemiology and global health*, 7(Suppl 1), S7-S15.
- Alahmmari, A. Y., & DipOdp, B. S. N. (2016). Exploring cultural barriers to effective communication between expatriate nurses and patients in the Kingdom of Saudi Arabia. *Monash University*.
- Alanazi, A. H. (2024). *Achieving global recognition: higher education rankings and the commitment to quality in Saudi Arabia's 2030 Strategic Vision* (Doctoral dissertation, University of Glasgow).
- Aldakhil, D. (2023). The use of strategic public relations communication techniques in campaigns to raise awareness of breast cancer: a case study of breast cancer campaigns in Saudi Arabian charities.
- Aldosari, H. (2017). *The effect of gender norms on women's health in Saudi Arabia*. Washington, DC: Arab Gulf States Institute in Washington.
- Aldossari, M. (2019). *Public Health Priorities, Awareness, and Perceptions of Saudi Stakeholders: Results of Two National Surveys* (Doctoral dissertation, Johns Hopkins University).
- Al-Dossary, R. N. (2018). The Saudi Arabian 2030 vision and the nursing profession: The way forward. *International nursing review*, 65(4), 484-490.
- Al-Dossary, R., Alamri, M., Albaqawi, H., Al Hosis, K., Aljeldah, M., Aljohan, M., ... & Almazan, J. (2020). Awareness, attitudes, prevention, and perceptions of COVID-19 outbreak among nurses in Saudi Arabia. *International journal of environmental research and public health*, 17(21), 8269.
- Alduraywish, S. A., Altamimi, L. A., Aldhuwayhi, R. A., AlZamil, L. R., Alzeghayer, L. Y., Alsaleh, F. S., ... & Tharkar, S. (2020). Sources of health information and their impacts on medical knowledge perception among the Saudi Arabian population: Cross-sectional study. *Journal of Medical Internet Research*, 22(3), e14414.
- Alghamdi, R., Albloushi, M., Alzahrani, E., Aldawsari, A., & Alyousef, S. (2019). Nursing education challenges from Saudi nurse educators' and leaders' perspectives: A qualitative descriptive study. *International journal of nursing education scholarship*, 16(1).
- Alghamdi, R., Albloushi, M., Alzahrani, E., Aldawsari, A., & Alyousef, S. (2019). Nursing education challenges from Saudi nurse educators' and leaders' perspectives: A qualitative descriptive study. *International journal of nursing education scholarship*, 16(1).
- Alghamdi, S. M., Aldhahir, A. M., Alqahtani, J. S., Siraj, R. A., Alsulayyim, A. S., Almojaibel, A. A., ... & Alqami, A. A. (2022, August). Healthcare providers' perception and barriers concerning the use of telehealth applications in Saudi Arabia: a cross-sectional study. In *Healthcare* (Vol. 10, No. 8, p. 1527). MDPI.
- Alhabib, M. Y., Alhazmi, T. S., Alsaad, S. M., AlQahtani, A. S., & Alnafisah, A. A. (2022). Medication adherence among geriatric patients with chronic diseases in Riyadh, Saudi Arabia. *Patient preference and adherence*, 2021-2030.
- Al-Hanawi, M. K., Khan, S. A., & Al-Borie, H. M. (2019). Healthcare human resource development in Saudi Arabia: emerging challenges and opportunities—a critical review. *Public health reviews*, 40, 1-16.
- Al-Hazzaa, H. M., & AlMarzooqi, M. A. (2018). Descriptive analysis of physical activity initiatives for health promotion in Saudi Arabia. *Frontiers in public health*, 6, 329.
- Aljohani, K. A. S. (2020). Nursing education in Saudi Arabia: History and development. *Cureus*, 12(4).
- Alkhamis, A., & Miraj, S. A. (2021). Access to health care in Saudi Arabia: development in the context of vision 2030. In *Handbook of healthcare in the Arab world* (pp. 1629-1660). Cham: Springer International Publishing.

- Alluhidan, M., Tashkandi, N., Alblowi, F., Omer, T., Alghaith, T., Alghodaier, H., ... & Alghamdi, M. G. (2020). Challenges and policy opportunities in nursing in Saudi Arabia. *Human Resources for Health, 18*, 1-10.
- Alomrani, M. (2021). *Disaster nursing education: a qualitative case study to determine the key concepts for national education in the Kingdom of Saudi Arabia (KSA)* (Doctoral dissertation, University of York).
- Al-Otaibi, A. G., Aboshaiqah, A. E., & Aburshaid, F. A. (2024). Structural Empowerment, Resilience, and Intent to Stay Among Nurses and Midwives in Obstetrics and Gynecology Departments: A Phenomenological Inquiry Study in Saudi Arabia. *SAGE Open Nursing, 10*, 23779608241247434.
- Alotaibi, A., Saleh, W., Abdulbaqi, A., & Alosaimi, M. (2022). Health research priority agenda for Ministry Of Health, Kingdom of Saudi Arabia from 2020 to 2025. *Journal of Epidemiology and Global Health, 12*(4), 413-429.
- Alqahtani, O. A. (2024). Role of Nurses in Patient Adherence to Treatment Regimens and Health Literacy. *Letters in High Energy Physics*.
- Alrashidi, H. N., Alanazi, F. M., Aldafery, A. S., Alruwaili, H. H., Alrashidi, A. S., & Alrashidi, M. N. LEVERAGING TECHNOLOGY AND PATIENT ENGAGEMENT FOR SAFER CARE: VIEWS OF NURSES IN SAUDI ARABIA.
- Alruily, M. S., Alamre, M. D., Suhaim, S. M. B., Al Bishi, S. A. M., Illi, A. T. A. R., Alshehri, A. A. Q., ... & Al Shahrani, B. M. (2024). Impact of Nurse Interventions on Diabetic Patient Outcomes. *Journal of International Crisis and Risk Communication Research, 7*(2), 135-142.
- Alsadaan, N., Jones, L. K., Kimpton, A., & DaCosta, C. (2021). Challenges facing the nursing profession in Saudi Arabia: an integrative review. *Nursing Reports, 11*(2), 395-403.
- Alshammari, S. (2024). *Making the invisible visible: the lived experiences of female nurse managers in the Ministry of Health in Saudi Arabia pre-and post-promulgation of Vision 2030: an interpretative phenomenological analysis* (Doctoral dissertation, Cardiff University).
- Alyousef, S. M., Alhamidi, S. A., Albloushi, M., & Eid, T. A. (2020). Perceptions of media's contribution toward stigmatization of mental health by Saudi Arabian nurses. *Journal of the American Psychiatric Nurses Association, 26*(6), 568-575.
- Chetty, K. (2021). The cost of caring: ICU workload stressors and the Saudi Arabian nurse. *Health Science Journal, 15*(2), 1-7.
- Chowdhury, S., Mok, D., & Leenen, L. (2021). Transformation of health care and the new model of care in Saudi Arabia: Kingdom's Vision 2030. *Journal of Medicine and Life, 14*(3), 347.
- Elgzar, W. T., Al-Qahtani, A. M., Elfeki, N. K., & Ibrahim, H. A. (2020). COVID-19 outbreak: effect of an educational intervention based on health belief model on nursing students' awareness and health beliefs at Najran University, Kingdom of Saudi Arabia. *African journal of reproductive health, 24*(2), 78-86.
- Mani, Z. A., & Goniewicz, K. (2024). Transforming Healthcare in Saudi Arabia: A Comprehensive Evaluation of Vision 2030's Impact. *Sustainability, 16*(8), 3277.
- Mani, Z. A., Naylor, K., & Goniewicz, K. (2024). Essential competencies of nurses for climate change response in Saudi Arabia: A rapid literature review. *Journal of Advanced Nursing*.
- Owilli, A. O. (2019). *The Role and Responsibilities of Public Health in Promotion of Health Equity: A Scoping Review* (Doctoral dissertation, University of Saskatchewan).
- Sacgaca, L. P., Al Mutairi, A. K., AlAmoudi, F. A., Abdalla, A., Al Jehani, M. O., Alharbi, L. L., ... & Almoqad, A. A. (2024). Breast Cancer Knowledge, Practice of BSE, and Prevention Behaviors of Student Nurses in Saudi Arabia: A Structural Equation Modeling on a Nationwide Scale.
- Shamlan, Z. B. M. A., Alhowar, S. S., Al Makrami, M. A. Y., Al Zamanan, H. R., Al Mansour, H. M. A., Alzahuf, G. A. S., ... & Al-Dakhil, K. A. R. (2023). Chronic Disease Management: Policies For

Majed Muidh Alotaibi, Awad Moed Abdullah Alalyani, Muteb Abdullah Aljuaid, Abdulrhman Ibrahim I Alkhalf, Karim Suliman Awdah Alatawi, Sultan Eid Alotaibi, Saud Saeed Alotaibi, Jahez Zidan Alenizy, Almutairi, Bassam Khualif B,

Prevention And Control In Public Health Nursing. *Journal of Namibian Studies: History Politics Culture*, 36, 370-380.

Sharefi, D. S. M., Dfran, F. Y., Hakami, F. H., Dohal, S. A. M., Hashim, I. A. H., Zuqayl, A. M., ... & Aqeel, A. Y. A. (2024). The Role of Clinical Nurse Specialists in Improving Patient Outcomes in Saudi Arabia. *Journal of International Crisis and Risk Communication Research*, 7(2), 143-160.

Sultan, M. A. S., Khorram-Manesh, A., Carlström, E., Sørensen, J. L., Sulayyim, H. J. A., & Taube, F. (2020). Nurses' readiness for emergencies and public health challenges—The case of Saudi Arabia. *Sustainability*, 12(19), 7874.