

**Review Article**

# Overview of Cancer Care and Oncology Nursing in the Kingdom of Saudi Arabia

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**Abstract:** Cancer prevalence is increasing in the Kingdom of Saudi Arabia. While the exact etiology of this trend is unknown, it can perhaps be partially attributed to an increased life expectancy and changes in lifestyle habits. One of the main challenges to the provision of appropriate cancer and palliative care is the critical shortage of oncology healthcare professionals, including nurses. The Kingdom of Saudi Arabia is characterized by its Islamic faith, culture, and unique traditions that may contribute to uniquely stressful situations for oncology nurses working in Saudi oncology care settings. This article provides an overview of cancer care and oncology nursing in the Kingdom of Saudi Arabia based on literature reporting challenges experienced by nurses delivering this care within the Saudi Arabian healthcare system and its cancer care services. Published literature written in English on cancer care and oncology nurses in the Kingdom of Saudi Arabia were identified through a search of publicly available databases such as Medline, CINAHL, and Google Scholar as well as government sources. Reference lists were hand searched. Search terms used were Kingdom of Saudi Arabia, Saudi Arabian healthcare system, nursing education, nursing, Saudi nurses, oncology nursing, cancer, and cancer care. Common challenges facing oncology nursing in the Kingdom of Saudi Arabia are related to high job demands, staff shortages, communication and language barriers, and cultural differences that may lead to stressful work environments and reduce the quality of care provided to their patients. While many steps have been undertaken by the Saudi Ministry of Health to reform the healthcare system, a number of challenges remain. The need for greater availability of cancer care and palliative care settings in all Saudi regions is strongly indicated. Nursing administrators/managers should take these factors into consideration to enhance the Saudi oncology care nursing work environment and to improve the quality of nursing care for patients with cancer and their families.

**Keywords:** Cancer Care, Communication Barriers, Oncology Nursing, Kingdom of Saudi Arabia, Review, Saudi Culture, Staff Shortages, Job Stress

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## 1. Introduction

The Kingdom of Saudi Arabia (KSA) is comprised of 2.24 million square kilometers making it the largest country by area in the Middle East [1] and contains one of the largest accessible oil reserves in the world [2]. Its oil producing capacity has caused a rapid socio-economic shift over the past 50 years leading to a noticeable influence on the population's health and lifestyle [3]. Most recent population figures indicate that the KSA has reached a population of 31,540,000

with 10,690,000 being under the age of 18 years [1]. The annual population growth rate is 2.7% and the total fertility rate is 3.8%. Due to improvements in both healthcare and community services, life expectancy among the Saudi population increased from 69 years in 1990 to 76 years in 2012 [1]. The Saudi government has dedicated a vast amount of its finances towards enhancing healthcare, with the principle aim of offering free and accessible health services to both every Saudi citizen and foreign individual employed within the public sector [1, 3]. Despite these achievements, the

Saudi healthcare system still faces many challenges in effective collaboration across other healthcare partners necessitating new Ministry of Health (MOH) strategies and policies [4]. The purpose of this paper is to provide an overview of cancer care and oncology nursing in the KSA by discussing the SA healthcare system, nursing education, Saudi culture, cancer care, and challenges that face oncology nurses delivering SA cancer care.

## 2. Saudi Arabian Healthcare System

The KSA healthcare system is comprised of hospitals, primary healthcare, and community health centers that are operated by governmental organizations, nongovernmental organizations, and the private sector. The hospitals are classified as national referral, regional referral or district/rural hospitals. The MOH, as the chief governmental organization, assumes major accountability for the KSA's preventive, curative, and rehabilitative facilities in its healthcare system. The system includes a total of 249 hospitals (34,370 beds) and 2094 primary healthcare centers [5, 6]. The MOH is the principal government organization accountable for strategic planning, health policies, management, and assessment of all health-related services within the SA [3]. In addition, it is responsible for directing other government agencies and the private sector on the means to accomplish the government's health goals [7]. Other governmental organizations providing healthcare directly to their staff and selected members of the general population include: the Ministry of Defense and Aviation, the Ministry of the Interior, the Saudi Arabian National Guard, and the University Teaching Hospitals [3, 4]. The Saudi MOH offers primary healthcare through a network of primary healthcare centers whose services emphasize health education in immunization, nutrition, smoking, prevention of motor vehicle accidents, and other public health issues [7]. Primary healthcare centers' staff refer their patients to acute and advanced healthcare through both general and specialist hospitals. The delivery of healthcare through the private sector has increased in the KSA in recent years and is organized within a referral system comprising a total of 127 hospitals (12, 817 beds) and 2362 dispensaries, polyclinics, private clinics, company clinics, and pharmacies [5, 6]. The private sector offers healthcare services to the Saudi population and foreign insured individuals through their own organizations and other health insurance plans [7]. A growing number of foreign individuals seek treatments at privately funded hospitals due to increasing access problems with MOH facilities [8]. Consequently, the MOH delivers 60% of national healthcare services, with the private sector and other governmental organizations together accounting for the remaining 40% [8]. Globalization, modernization, and economic growth in the KSA have a significant effect upon Saudis' health-related behaviours. These behaviours are influenced by their access to foods. For example, average meat supply/person/day during the period of 2001- 2007 increased to 130g from only 26g./person/day consumed in 1961-1971 demonstrating a 435% increase [9]. In addition,

any of the newly introduced foods contain high sugar content thus sugar consumption has increased by more than 2.5 times per person between 2000-2007 as compared from 1961-1971 [9]. Furthermore, the consumption of soft drinks and the spending on dining out have also increased [9]. Compounding this situation, Al-Hazzaa [10] indicated that the total rate of physical inactivity among Saudi citizens ranged from 43.3% to 99.5%. The prevalence of obesity has also increased among both Saudi adults and children [11]. The Saudi Diabetes and Endocrine Association in 2010 estimated the indirect and direct costs of obesity problems in the KSA population to be about five billion dollars per year [9]. Furthermore, rates of hypertension, hypercholesterolemia, type 2 diabetes, arthritis problems, and cancer have all increased dramatically in recent years among Saudi citizens [11, 12]. These unhealthy diets, smoking, lack of sufficient physical activity, chronic viral infections, and lack of knowledge about cancer and its prevention and screening methods have resulted in rising burden of cancer reported as one of the fastest growing health concerns in the KSA [12, 13, 14, 15]. Based on this increasing cancer burden in the KSA, there is a need for cancer prevention based on healthy lifestyle programming and educational activities for the Saudi population.

## 3. Cancer Epidemiology in the Kingdom of Saudi Arabia

A review of the literature revealed that most KSA patients with cancer are more likely to present at a more advanced stage and at a younger age compared with Western countries [14, 16]. Advanced stage cancer includes the most serious metastatic cancers. At this stage, the cancer has spread to distant sites of the body, such as the liver, lungs, bones, brain, and/or others [17]. In 2016, the Saudi Cancer Registry (SCR) [18] reported that the total number of all cancer cases among both Saudi nationals and non-Saudis in the KSA was 11,645 (77.6%) and 3,356 (25.4%) as of 2013, respectively. Overall cancer was more prevalent among women (8,294, 53%) than men (7,359, 47%), with a male to female ratio of 86:100 [18]. The overall age-standardized incidence rate (ASR) for all Saudis (using a world standard population reference) was 79.1/100,000 in males and 89.4/100,000 in females [18]. The top five malignancies in Saudi females are breast cancer, thyroid cancer, colorectal cancer, non-Hodgkin lymphoma, and corpus uteri, while among Saudi males are colorectal cancer, non-Hodgkin lymphoma, leukemia, liver cancer, and lung cancer [18]. Al-Ahmadi *et al.* [19] suggest that an increase in wealth accompanied by a change in the lifestyle, smoking, dietary habits, and disease patterns as well as an increase in life expectancy within the KSA population; may have influenced the incidence of certain types of cancers. The SCR [18] reported a rising proportion of breast cancer among Saudi women of all ages, from 10.2% in 2000 to 29.1% in 2013. The incidence of breast cancer has been theorized to be related to low vitamin D exposure due to the cultural pattern of women covering their total bodies with their black abayas, a

lack of knowledge about the common risk factors of breast cancer, and lack of understanding of the importance of breast self-examination and effective screening methods [15, 20].

Similarly to other countries, breast cancer in the KSA is the most common cancer in women [21].

**Table 1.** Ten Most Common Cancers among Saudi, 2013 (All Ages).

Cancer Type	Number	Percentage
Breast	1874	16.1
Colo-rectal	1387	11.9
Thyroid	884	7.6
NHL	746	6.4
Leukemia	684	5.9
Liver	495	4.3
Lung	435	3.7
Hodgkin disease	393	3.4
Stomach	316	2.7
Kidney	313	2.7

Note: Figure presenting total number of cancer incident cases among Saudis during the year 2013 (SCR, 2016).

**Table 2.** Ten Most Common Cancers among Saudi by Sex, 2013.

Cancer Type	Male (5281) Number/Percentage	Cancer Type	Female (6364) Number/Percentage
Colo-rectal	736/13.9%	Breast	1853/29.1%
NHL	435/ 8.2%	Thyroid	702/11.0%
Leukemia	402/7.6%	Colo-rectal	651/10.2%
Liver	339/6.4%	NHL	311/4.9%
Lung	326/6.2%	Corpus Uteri	289/4.5%
Prostate	306/5.8%	Leukemia	282/4.4%
Hodgkin Disease	239/4.5%	Ovary	194/3.0%
Bladder	227/4.3%	Liver	156/2.5%
Stomach	195/3.7%	Hodgkin Disease	154/2.4%
Kidney	193/3.7%	Brain	128/2.0%

Note: Figure presenting total number of cancer incident cases among Saudis by sex during the year 2013 (SCR, 2016).

Breast cancer also occurs at an earlier age in Saudi women (the average age is 50 years) versus in other Western countries such as in the USA (average age is 61 years) [18]. In 2013, there were 495 cases of liver cancer accounting for 4.3% of all newly diagnosed cases [18]. This incidence of liver cancer in the KSA is not unexpected due to the high prevalence of chronic infections with hepatitis B and hepatitis C viruses among the Saudi population which is a precursor for liver cancer [13]. This cancer ranked fourth in males and eighth in females and affected 339 (68.5%) males and 159 (32.1%) females with a male to female ratio of 213:100 as of 2013. Moreover, the prevalence of lung cancer has increased considerably in recent years, accounting for 3.7% of all newly diagnosed cancers, primarily caused by the increased incidence of cigarette smoking among Saudi men and women [18, 22]. In 2016, the SCR reported that lung cancer ranked fifth most common form in males and fifteenth in females as of 2013. Of the 3.7% of those with lung cancer 326 (74.9%) were males and 109 (25.1%) females with a male to female ratio of 299:100. Alamoudi [22] has also indicated that lung cancer was the most common cause of hospitalization among Saudi male patients admitted for respiratory diseases.

#### 4. Cancer Care in the Kingdom of Saudi Arabia

Healthcare services for patients with cancer fall under the

umbrella of the MOH whether delivered in public or private health institutions. Specialized oncology care settings are located in cities where about 80% of the Saudi population live [23]. Previously, cancer care services could only be found in the larger cities, such as Jeddah, Riyadh, and Dammam. Recently, more cancer care settings have been established in smaller towns, including Madina, Qaseem, and Makkah with further expansion planned [19]. However, nursing and other health professional expertise in cancer care is still lacking in the vast remote or rural areas of the KSA where 20% of patients with cancer live [19]. Thus, healthcare services for patients with cancer in these rural and remote areas are commonly delivered by non-oncology specialist health professionals such as general and family physicians or gynecology obstetrics unit staff [23]. As a result, many patients with cancer living in remote or rural areas experience delays in their diagnosis, or are referred to an oncology care settings in a KSA major city only when their cancers are in very advanced stages (stage 4 of cancer) leading to a high mortality rates from cancer [19, 23]. Despite accessibility of expert oncologists and advanced treatment options in the KSA, many Saudi patients with cancer, only seek medical assistance when their disease is in its advanced stages which makes effective treatment difficult [24]. Furthermore, Saudi family's cultural practice of requesting non-disclosure of cancer diagnosis and prognosis to their family member may delay treatment and cause difficulty in managing patient's cancer care [25]. Researchers suggest that delays seem to be

attributed to the low knowledge level and health literacy about cancer and its prevention among the Saudi population, and lack of educational activities provided through local healthcare organizations [26], and inadequate accurate health information about risk factors for and treatments of cancers, and misconceptions regarding supportive palliative care and the use of narcotic drugs for pain relief [27]. This late diagnosis and treatment pattern may therefore be related to inadequate awareness about cancer prevention and screening programs available in Saudi communities [28]. Currently, there are more than 15 oncology care settings in the KSA offering a variety of services including: intensive cancer care management units, consultation services, routine screening, cancer therapy, rehabilitation, home healthcare programs, outpatient clinics, and supportive care services (diet center, physical therapy, patient education, pharmacy, and both institutional units for palliative care with translation and religious authorities to attend the spiritual needs of the terminally ill cancer patients) as well as home-based care [19, 29]. The first palliative care program began more than 20 years ago at King Faisal Specialist Hospital and Research Center, Riyadh and programs are now available in a number of hospitals serving more than 5,000 patients annually [30]. These programs provide services for both outpatients and terminally ill patients with cancer both as inpatients and in their homes via home healthcare services. Home-based care programs in the KSA comprise formal, regulated cancer care programs to promote, restore, and maintain a person's maximum level of comfort, function, and health including care towards a dignified death, are also available in some areas and provided by a variety of health care professionals in the patient's home [31].

## 5. Nursing Education in the Kingdom of Saudi Arabia

There are many Saudi training schools and universities offering programs for healthcare professionals. Two-thirds of these institutions are administered by the government and the remaining third by either non-governmental organizations or private industry [4]. For example, there are three bachelor of nursing programs that were initiated by the Saudi government first in 1976 at the King Saud University in Riyadh, followed by the King Abdulaziz University in Jeddah in 1977 and finally at the King Faisal University in Dammam in 1987 [32]. There are also about 44 private health institutes and five privately funded health training schools providing nursing training and educational programs [33]. These nurses' training schools are distributed among the various regions throughout the country [34]. Nursing education encompasses many programs leading to different cadres of nurses depending upon their admission educational level to the program and the program's length. The Saudi nursing programs offer educational learning leading to associate, bachelor, master, and doctoral degrees. The three-year associate degree or diploma registered nurses level of training admits students

who have a high school certificate in natural sciences. Graduates at this level can become registered general nurses (RN), midwives (RM), pediatric nurses (RPN) or mental health nurses (RMN) [34]. (The bachelor of science in nursing degree programs (BSN) require four years of university level study and an additional one year internship in nursing practice. The BSN program also prepares nurses for careers in nursing, midwifery, primary healthcare (community nursing), and research [34]. Admission to these university programs is limited to students with high school preparation in sciences. In addition since 1987, the Ministry of Higher Education has offered a master of science in nursing (MScN) program at the King Saud University. This program was the first of its kind in the Gulf region's universities [35]. In 1994, a PhD program was also established in King Abdulaziz University through a cooperative arrangement with British universities to facilitate career development for Saudi female nurses who are unable to study abroad [36]. Nurses who receive their BSN are categorized as registered nurses (RN), while nurses who obtain a master of science in nursing are categorized as clinical nurse specialists (CNS) [37]. Nurses with PhDs and three years of clinical experience are recognized as advanced practice registered nurses [37]. To accommodate the emergent need for nurses in the KSA, international scholarship programs are also provided by numerous organizations including universities, the Ministry of Higher Education, the Ministry of Health, and large Saudi hospitals such as the King Faisal Specialist Hospital and Research Centre, and the King Abdulaziz University Hospital [4]. The aim of these international graduate scholarship programs is to prepare highly educated and experienced Saudi-educated nurses to lead the nursing profession in the KSA [4]. Currently, Saudi-educated nurses comprise approximately 32% of the nursing population [5]. Sixty-seven percent of this group hold a diploma in nursing from health institutes; 30% hold an associate degree from junior colleges; and 3% hold a bachelor's degree from universities [38]. Based on the last available information, there are only 28 Saudi-educated nurses with a master's degree, and seven nurses with a doctoral degree [36]. Alsaqri [38] indicates that while there is anecdotal evidence of more Saudi-educated nurses gaining PhDs (e.g. Villanova University in Pennsylvania, US), there are no statistics tracking the number of Saudi nurses with PhDs working in the KSA. It is therefore anticipated that the number of Saudi-educated nurses who hold master and PhD degrees may have increased in recent years. These increases are likely attributed to international scholarship and internal postgraduate nursing programs offered from healthcare organizations and universities in the KSA (exact data are unavailable). Nursing in the KSA has recorded notable advancements within areas of education, workforce composition, and practice. Nonetheless, the KSA is challenged by a serious shortage of Saudi-educated nurses. This serious shortage, along with the major growth in public and private healthcare organizations, has subsequently led to an increased demand for and reliance on internationally educated nurses (IENs) from countries such as India, China,

Philippine, South Africa, Australia, and North America to meet the healthcare system service delivery needs [3, 38, 39].

## 6. Nursing Workforce in the Kingdom of Saudi Arabia

The KSA, as with many other countries globally, continues to be confronted with a nursing shortage. To augment this shortage the number of IENs represents about 68.2% of the total nursing workforce, while Saudi-educated nurses represent 31.8% [40, 41]. Thus, there is a gap in the number of Saudi-educated nurses to meet the Saudi healthcare system needs. Research suggests that the shortage of Saudi-educated nurses and reliance on IENs is related to a number of factors including: social and cultural beliefs about the role of women in society; family conflict over women entering nursing; socio-cultural issues reinforcing the prevailing negative images and perceived low prestige of nursing within the KSA; the concern of Saudi women about not being "marriageable" once employed as nurses; long working hours of nurses; and nurses having to deal with male patients [4, 42]. In short, the unattractive image of nursing as a profession in the KSA and the cultural opposition toward female employment could explain the small number of Saudi-educated female nurses and why the KSA is relying on foreign workers in the nursing sector [5]. The Saudi MOH is the chief provider of public healthcare in the KSA, and employs a total of 75,978 nurses representing 58.5% of the total SA nursing workforce of 129,792 nurses [5]. Of the MOH employed nurses, 45,875 (55.3%) are Saudis, while the remainder come from international countries [40, 41]. Overall in the KSA the majority of nurses work in publicly funded hospitals (58.5%), while the remainder work in primary healthcare centers and other related sectors. While the portion of Saudi-educated nurses relative to IENs working in public healthcare organizations has increased from 9% in 1996 to 21.5% in 2002 and 31.8% in 2010 [5], this growth, while substantial, is insufficient to meet the country's needs. The overall ratio of nurses to population in the KSA's different healthcare sectors is 48/10000 people [43]; of this ratio 32.2/10,000 work in MOH facilities and the remainder 7.8/10,000 work in private facilities. Although this ratio is higher than in other Arabic countries such as Egypt (34/10,000), Bahrain (36/10,000), Jordan (40/10,000), and the UAE (41/10,000) it is still lower than in Western countries such as the United Kingdom (95/10,000), the USA (98/10,000), France (93/10,000), and Canada (105/10,000) as compared with the global average of 86/10,000 [43]. An important contributing factor to the KSA nursing shortage crisis relates to the high dependency on IENs [4, 5, 39]. The majority of the IENs come from India, Philippine, Malaysia, South Africa, Australia, and other countries in the Middle East [4]. While the KSA has been one of the most preferred destinations for IENs, because of benefits, such as high tax-free salaries, bonuses, free accommodation and medical care, long annual vacations, and yearly round trip airfare tickets to their homeland [4, 44], most

of IENs tend to use the Saudi healthcare organizations as a transitory setting to acquire training and experience. After a period of time, they leave the KSA with their acquired experiences and skills to work in developed countries such as the USA, the UK, Canada, and Australia [4, 35]. While there are currently no statistics available to report the extent of this pattern, it has become apparent that IENs' turnover is often a main source of distress for managers in KSA healthcare organizations [3]. Closing the gap between Saudi-educated nurses and the need for IENs cannot be achieved in the short-term. On the national level, there are currently an inadequate number of Saudi-educated nurses graduating from Saudi nursing schools, coupled with an increasing number of nurses who drop out or leave the nursing workforce shortly after gaining employment [45]. Hence, the ability to increase the Saudi nursing workforce is challenged by the above factors. Other factors that contribute to the KSA nursing shortage include lack of awareness about nursing opportunities among high school students, the nature of nursing work (high workload, long working hours, night shifts, and working over public holidays and weekends), poor salary, gender/cultural issues, lack of social support, lack of professional growth, and conflict with others cited earlier [4, 36, 39, 46]. Almalki et al. [4] indicated that to reduce the impact of nursing shortages, long-term healthcare and nursing strategies are needed including retaining more Saudi-educated nurses in the workforce and improved retention of the current IENs' workforce. At present, there are no statistics tracking the number of nurses, including Saudi-educated nurses, in oncology nursing fields working in the KSA.

## 7. Education Preparation in Oncology Nursing

Overall, the KSA has made a notable investment in training healthcare professionals in cancer and palliative care. Most oncologists in the KSA now are educated and trained in North America [47]. In the Saudi oncology care settings such as King Faisal Specialist Hospital and Research Center, palliative care members offer a structured postgraduate program for physicians and nurses to pursue subspecialty training in palliative care [48]. Health sciences schools have also recently begun teaching oncology care to nursing, medical, and other healthcare professionals to help offset the predicted shortages of staff and meet future needs of patients with cancer [47]. The WHO Regional Office has conducted a series of training sessions for physicians and healthcare staff connected with cancer and palliative care. Training focused on the use of the WHO's protocol for integration of cancer and palliative care in primary health care to expand the services and empower primary health care staff based on preliminary assessment of country needs and resources [30]. A similar approach to training was also provided for staff in home-based palliative care programmes and organized through KSA Regional WHO Collaborating Centre [30]. In spite of the improved training for cancer and palliative care, there remains a limited number of

oncology healthcare professionals, including oncology nurses, leading to limitations in patient access to specialized oncology diagnosis, treatment, and care [19, 36].

## 8. Islam, Saudi Cultural and Social Aspects in Cancer Care

Islam is the predominant religion influencing the Saudi culture. The Arabic word Islam means total submission to the will of Allah (the creator of the universe) by conforming inwardly and outwardly to His law [49]. This belief is constantly expressed in the life of the Saudi population and is reflected in the flag of the country and its legal system. It also relates to the Saudi people's activities of daily living [50]. In addition, like other Muslim people, Saudi individuals believe that health, illness, and death all come from God (Allah) [44]. The Saudi patient is perceived as a member of an extended family. The family is accountable to protect and provide care to the patient. These close family members combined with a strong Islamic belief, have a responsibility to offer care for their relative in situations of need, by helping make their lives as happy and comfortable as possible [51]. Most major decisions in Saudi families are taken by, or at least involve the most senior male member of the family [51]. Patient treatment decisions or consent for any medical procedures usually involves the extended male family members, who assume their role to prevent emotional distress to the patient [51]. Therefore, the Saudi family has a significant influence on patient care decision making [24, 51, 52]. Hence, at times Saudi patients, especially if they are females, may not have direct decision-making authority for their own care during their disease process. Saudi's belief in destiny and life after death helps them cope with the diagnoses of cancer or terminal illness [50]. Breaking bad news about a person's health is therefore influenced by the cultural and social norms of the KSA and has a considerable impact on the patient and his/her family [50]. Thus, these cultural norms affect truth-telling to patients about the diagnosis, management, and prognosis of cancer [51]. (Al-Amri, 2010; Almostadi, 2012; Younge *et al.*, 1997). Family members may believe that their relative with cancer should have the truth about their condition withheld as it may be perceived to lead to more harm and suffering. Furthermore, some family members believe their relatives are not well-educated and lack understanding about their health condition; consequently, they may ask healthcare professionals, particularly physicians, to withhold or limit information provided to their family members [51, 53]. Consequently, some family members of Saudi patients with cancer believe they should protect their loved ones by not informing them about their diagnosis and prognosis of cancer, and manage the care without their consent and knowing why their treatments are being provided [53]. Subsequently, withholding information about a Saudi cancer patient's prognosis (impending death) may cause communication problems between healthcare professionals and patients. These limitations can prevent oncology nurses from

discussing and supporting their patients' emotional feelings about their condition [24]. This barrier further challenges nurses' ethical values of veracity. Truthful communication is a necessary requirement for developing successful nurse-client relationships that lead to the establishment of trust [54]. Truth-telling then is considered to be an ethical concern as well as a moral responsibility by many healthcare providers, including oncology nurses in the KSA [51, 52, 53]. Disclosure of truth fosters trust and is crucial for establishing respectful nurse/patient relationships [55].

## 9. Oncology Nursing Care in Saudi Arabia Context

Research evidence suggests that Saudi patients with cancer participate with health care teams in their care at varying levels due to previously discussed cultural and social norms [51, 52, 53]. Communications with the family about care that exclude the input of their patients in disease management and treatment decision-making can also create ethical dilemmas for IENs [51, 52, 53]. Studies suggest that these limitations in open communication with patients about their prognosis and potential death frequently creates challenges to ethical values held by both Saudi and internationally educated oncology nurses, and contributes to a stressful work environment [52, 56, 57]. A further limitation in nurse-patient interactions relates to language. Although most patients with cancer and their families speak Arabic as their native language, most healthcare professionals including oncology nurses are non-Arabic speakers [58]. The language barrier between non-Arabic speaking nurses and their patients leads to increasing incidents of language and cultural misunderstanding [59] and further stress and tension between both parties in the KSA [52]. In contrast when patients are communicated to in Arabic by Saudi nurses there is increased patient and family satisfaction and better healthcare outcomes [60]. Several research studies have been conducted in the KSA investigating job stress, working conditions, and job satisfaction among Saudi and IENs working in both privately and publicly funded hospitals. These studies focused on individual nurse-variables such as burnout and intention to stay [38, 56] and organizational variables, such as leadership style, organizational commitment, recognition, and hospital performance [44, 61, 62, 63]. According to these studies, the difficult working conditions experienced by nurses practicing in the KSA reported on work overloads, lack of recognition, organizational support, and poor salaries that commonly lead to burnout, job stress, and job dissatisfaction. Strategies to overcome the above findings focused on increasing job satisfaction, retention of nursing staff, and reduction of job-related stressors by improving work environments, offering competitive wages, support for nursing personnel and a positive work environment.

## 10. Conclusions

In a climate of international nursing shortages, and the

present and expected future growth in the KSA population and its needed in the number of KSA healthcare organizations, and the increasing incidence of cancer cases, attention to preparation of oncology nurses is needed. To retain those nurses already working in oncology, efforts are needed to increase the number and proportion of Saudi nurses in this specialized field of practice and to address the workplace environment issues leading to turnover. The need for improve cancer care services in the Saudi hospitals and the availability of oncology care settings and palliative care in all regions in the KSA and not just in larger cities is being addressed. However, to overcome the gap in nursing personnel and reduce the KSA dependency on IENs to provide oncology care urgent efforts are required to prepare more nurses with a specialization in oncology nursing care to meet its population's growing needs for cancer care. Without attention to the above, the Saudi Arabian healthcare system is at risk. This article highlighted some challenges that both Saudi prepared nurses and internationally educated oncology nurses face in the KSA that may lead to stressful work environments and reduce the quality of care provided to their patients. Nursing administrators/managers should take these factors into consideration to enhance the work environments of oncology nurses and to improve their work performance in the KSA oncology care settings.

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