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Cancer Care in the Middle East: New Nursing Strategies for Improved Outcomes: A review

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Abstract

Cancer is becoming the fastest-rising lethal disease and a major public health problem in the Middle East. According to the World Health Organization (WHO), cancer is the second leading cause of death in the region, after cardiovascular disease. The incidence of cancer is rising in the Middle East, due to a number of factors like changes in diet, smoking, decreased physical activity, air pollution, water pollution, and exposure to chemicals. Therefore, there is an urgent need to train local health professionals such as oncologists, palliative care experts, oncology nurses, psychologists, social workers, physiotherapists, and spiritual counselors on early identification, curative therapy, and palliative measures. This review explores the innovative nursing strategies implemented in the region to improve patient outcomes and enhance the overall quality of cancer care.

Introduction

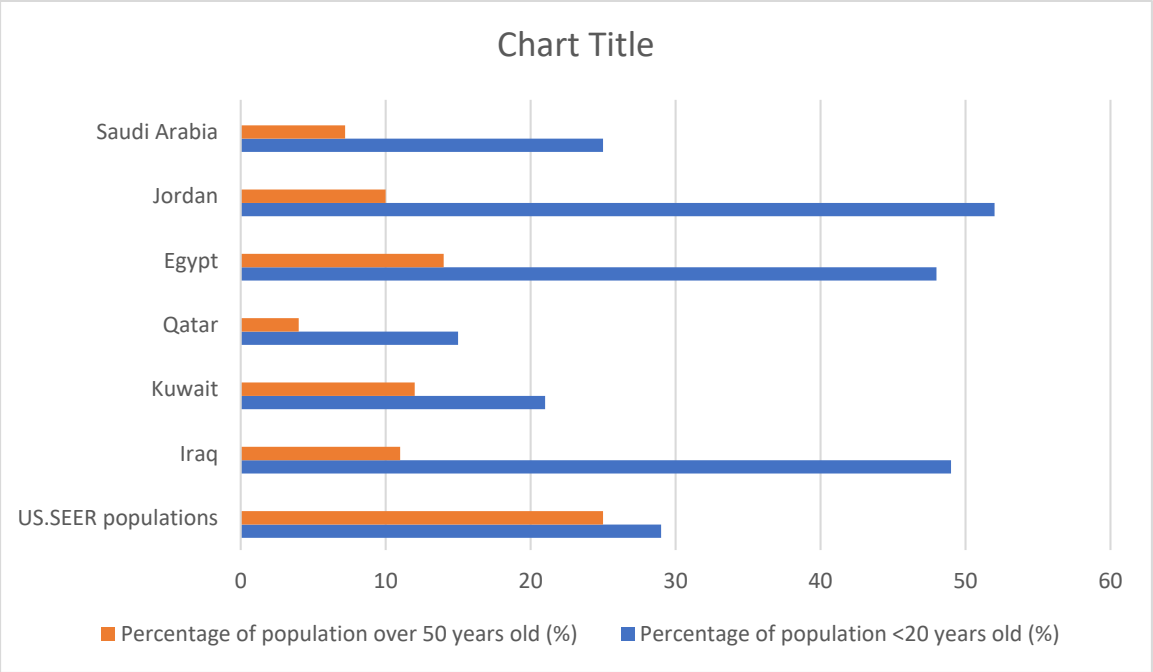
Care of Cancer patients in the Middle East is facing unique challenges due to cultural, societal, and healthcare system factors. However, there is a growing recognition of the need for new approaches to improve cancer care outcomes in the region. This review explores the efforts being made to promote innovative strategies for cancer care in the Middle East, with a focus on training healthcare professionals, addressing communication barriers, and integrating palliative care.

This paper will investigate the challenges of Middle Eastern culture and how these differences necessitate a different strategy, explain our understanding of the current status of cancer care in ME, and provide recommendations for changes by transitioning to a more patient-centered mode.

The Challenges in treating patients with cancer in ME

The region's changing demographics as seen in Table 1, there are significant disparities in the percentages of young and old in these groups with widely varying age distributions.

Chart 1. Age distribution in some Middle Eastern countries



As a result, cancer is currently less common, but the anticipated demographic shift over the following 20–30 years is predicted to cause an explosive rise in non-communicable diseases, including cancer and heart disease. Infectious diseases are still widely spread, and the burden of noncommunicable, chronic, and mental problems is increasing 7, 8. As a result, any recommendations for cancer treatment are, to the greatest extent practicable, adjusted to account for resource differences across nations as well as between various regions or people within a single nation 8.

Inadequate primary Healthcare Systems

This region's healthcare system has undergone significant changes in recent generations. One of the primary issues in cancer care is the scarcity of well-trained health care workers. This begins in hospitals with oncologists, palliative care experts, and psychiatrists and becomes even more obvious in the community, where family physicians are in short supply and those that are practicing may lack the necessary skills to manage cancer patients.

The current primary healthcare system forces cancer patients to seek treatment at the tertiary level, even for clinical situations such as unrelated medical problems (e.g., coughs

and colds) or symptoms that are easier to manage (e.g., pain, nausea, vomiting, and febrile neutropenia), which could be treated at a lower cost by local treating physicians. The requirement to travel to a distant healthcare facility as well as the additional time spent on each treatment frequently results in a lack of adherence to the initial therapy regimen and decreasing satisfaction levels.

Cultural norms that prevent the care of cancer patients

Cultural, religious, and family ideas and attitudes are also factors that hinder the early detection and treatment of cancer patients. There is a dearth of understanding of the early symptoms of the disease, prevention, and the advantages of an early diagnosis. These characteristics, combined with the fear and stigma associated with cancer in ME, frequently result in the late presentation of advanced disease 9. Females with breast cancer, for example, may be hesitant to report their disease to their families for fear of societal repercussions. The 'fatalistic' view of life and death, which holds that one has little control or power to influence outcomes, is another obstacle to the acceptance of preventative care among some disadvantaged groups 10. However, spiritual and religious convictions can be a source of strength for patients because spiritual discomfort, such as despair, theological conflict, and hopelessness, should be recognized and treated. Finally, in terms of therapy, there are not enough female professional caregivers, which limits female patients' access to the healthcare system.

Many inhabitants in the region have traditional beliefs that include accepting 'God's will,' which may hinder patients from seeking care, particularly those with terminal illnesses. Finally, the prominence of alternative techniques and 'religious treatments' makes adequate access to mainstream medical care difficult 6.

Workforce

When the number of physicians and paramedical staff is insufficient, one strategy to improve the care of cancer patients is to allow non-physicians, such as advanced practice nurses, to offer care. For example, the United Kingdom has 27.4 physicians per 10,000 people, Iran 8.9, Iraq 6.9, Oman 19, Yemen 3, Morocco 6.2, Sudan 2.8, Syria 15, and Lebanon 22 10. With so few doctors, making better use of their time is critical. Nurses being trained to execute duties that do not require a physician's training would allow physicians to devote more time to providing better care. Many patients treated by nurses were shown to be happier and healthier than those treated by doctors 5. Consultant nurses in the United Kingdom have been granted prescribing authority in particular areas when their competency has been assessed. Middle Eastern countries, like other developing countries, should reallocate resources so that nurses and other healthcare personnel can put their education to greater use.

Limited Resources on Cancer Patient Care, Treatment, and Prognosis

The current scenario and inequities will worsen owing to limited funds and healthcare spending per patient at a time when the price of new chemotherapy and molecular-targeted treatments is rising globally. The molecular diagnosis and identification of the damaged genes that are

responsible for a specific cancer in a particular patient are what guide contemporary therapy modalities. As a result, new chemotherapeutic treatments such as cetuximab or bevacizumab are out of reach for all but the wealthiest due to their high annual costs of over $100,000 and quality-adjusted life-year ratios of over $500,000.

Oncology care is delayed and of lower quality owing to the scarcity of funding for chemotherapy and radiotherapy. 40% of cancer cases result from radiation therapy (RT), which is also an affordable method of relieving cancer symptoms in individuals with advanced or metastatic disease. According to projections, moderate- or low-income nations will account for almost 70% of all cancer cases worldwide by 2025. These cases are often identified at an advanced stage, with the majority of patients requiring palliative care 11.

Overall, palliative care services are either nonexistent or severely limited in most Middle Eastern countries 12, 13. Palliative care is reasonably inexpensive and is always included in World Health Organization-approved budgets; however, it requires specialized expertise that may not be available in the region.

The Influence of Cultural Factors on Oncology Practice: Exploring Social Contracts

Because different cultures value health and disease differently, applying healthcare methods developed in Western countries to the Middle East is impossible. This disparity in pragmatic assessment of health and sickness stems from individualistic versus collective notions entrenched in distinct cultures: West versus non-West 13. Patients in Middle Eastern civilizations receive tremendous social support as a result of the communal approach from both family members and the surrounding society.

One of the most difficult problems for nurses with diverse patient groups is the development of their cultural competency. This is intended to assist students in developing communication skills in settings where patients come from a variety of backgrounds, which is especially crucial when dealing with a life-threatening condition like cancer. A critical difficulty is disclosing serious diagnoses and prognoses across cultures. This necessitates a grasp of the various cultural ideas around collusion and other potential conflict issues. In practice, this enables the nurse to ask proper questions and elicit preferences regarding information disclosure from each patient and, in many cases, a number of different family members, regardless of culture and mediates solutions to numerous quandaries and conflicts that may occur between the patient and his or her family 12.

The majority of the populations in the ME, where the majority of doctors see a positive value inherent in the nondisclosure of a diagnosis and terminal prognosis, do not share the current western/US medical culture's high value on individual autonomy and, consequently, full disclosure of information to the patient. However, using stereotypes and embracing presumptions about information preferences based on ethnicity should

be avoided in clinical practice because, as demonstrated above, a significant portion of the time, the assumption will be incorrect, and patients will either not receive the information they requested or receive it against their wishes. Table 2 displays some of these significant variances.

Table 1. Different approaches due to cultural differences between United States and Middle Eastern practice

Empty Cell	US	Middle East (ME)
Disclosure of information to patient	Almost universal in the past 10 years	Usually not
Who decides on treatment?	Patient	Family
Role of doctor in guiding decisions	Facilitator	Family knows best
Patient expectations/demands	Wants to be in control/demands all possible treatments	Expects family to be in control/less demanding, may be fatalistic/'God's will'

Establishing the nurse-patient interrelationship (therapeutic alliance)

The nurse-patient interrelationship, also known as the therapeutic alliance, is a collaborative relationship between the patient and the nurse. It is characterized by trust, respect, and shared goals. The therapeutic alliance is essential for providing effective and compassionate care to patients.

Introduce yourself and explain your role. This helps to put the patient at ease and establish a sense of trust. Ask the patient about their concerns and expectations. This shows that you are interested in the patient as a person and that you want to understand their needs. Be honest and transparent about the patient's condition and treatment options. This helps to build trust and ensure that the patient is making informed decisions about their care. Be patient and understanding. Patients may be feeling scared, anxious, or confused. It is important to be patient and understanding and to provide them with the support they need. Be respectful of the patient's culture and beliefs. This helps to create a sense of comfort and safety for the patient. Communicate effectively using clear language, avoiding medical jargon, and being mindful of the patient's emotional state. Furthermore, effective communication has been linked to improved psychological functioning, adherence to treatment, and increased quality of life and satisfaction for patients, whereas ineffective communication contributes to clinicians' stress, lack of job satisfaction, emotional burnout, confusion, and increased psychological distress 14 . Cancer treatment can be a long and difficult process. It is important to be patient with the patient and provide them with the support they need throughout their treatment. It is important to maintain a sense of hope for the patient. This does not mean that you have to guarantee a cure, but it does mean that you should offer the patient hope for the future.

Use of nanotechnology

Nanotechnology is a rapidly developing field with the potential to revolutionize cancer treatment and nursing care. Nanoparticles are tiny particles that can be used to deliver drugs, heat, or radiation directly to cancer cells. This can make cancer treatment more precise and less toxic, and it can also help reduce the side effects of treatment.

There are a number of ways that nanotechnology can be used to improve the treatment and nursing care of cancer patients in the Middle East. For example, nanoparticles can be used to deliver drugs directly to cancer cells, which can make cancer treatment more effective and less toxic. Target the cancer cells with heat or radiation; this can kill cancer cells without damaging healthy tissue. Image cancer cells in real time; this can help doctors make more informed decisions about treatment. Monitoring the effectiveness of treatment can help ensure that patients are getting the best possible care. Deliver nutrients and oxygen to cancer cells; this can help improve the quality of life for cancer patients.

Nanotechnology is still in its early stages of development, but it has the potential to revolutionize cancer treatment and nursing care in the Middle East. With continued research and development, nanotechnology could make cancer a more manageable disease and improve the quality of life for cancer patients 18.

In 2018, researchers at the University of Jordan developed a new type of nanoparticle that can be used to deliver chemotherapy drugs directly to cancer cells. This nanoparticle is made of a biodegradable material that is coated with a molecule that binds to cancer cells 16. When the nanoparticle enters the cancer cell, it releases the chemotherapy drug, which kills the cell. This new nanoparticle has the potential to make cancer treatment more effective and less toxic.

In 2020, researchers at the American University of Beirut developed a new type of nanosensor that can be used to image cancer cells in real time. This nanosensor is made of a molecule that emits light when it comes into contact with cancer cells. This light can be detected by a camera, which allows doctors to see cancer cells in real time. This new nanosensor has the potential to help doctors to make more informed decisions about cancer treatment.

In 2021, researchers at the King Abdulaziz University, Saudi Arabia developed a new type of nanocarrier that can be used to deliver nutrients and oxygen to cancer cells. This nanocarrier is made of a biodegradable material that is coated with a molecule that binds to cancer cells. When the nanocarrier enters the cancer cell, it releases nutrients and oxygen, which helps to improve the quality of life for cancer patients. This new nanocarrier has the potential to make cancer treatment more tolerable for patients.

As research continues, it is likely that nanotechnology will be used to develop even more innovative and effective cancer treatments.

Artificial intelligence for cancer therapy

Artificial intelligence (AI) is a rapidly developing field with the potential to revolutionize cancer treatment and nursing care. AI can be used to identify cancer earlier by analyzing medical images and data to identify cancer earlier, when it is more treatable. AI can be used to analyze a patient's individual tumor genetics to personalize cancer treatment. This can make cancer treatment more effective and less toxic. AI can be used to monitor a patient's cancer treatment and identify any problems early on. This can help ensure that patients are getting the best possible care 17. AI can be used to provide support to cancer patients through chatbots, virtual reality, and other technologies. This can help patients cope with the emotional and physical challenges of cancer. AI is still in its early stages of development, but it has the potential to revolutionize cancer treatment and nursing care in the Middle East. With continued research and development, AI could make cancer a more manageable disease and improve the quality of life for cancer patients.

In 2019, researchers at the King Saud University developed an AI-powered system that can identify cancer cells in medical images with 90% accuracy. This system has the potential to help doctors to identify cancer earlier, when it is more treatable.

In 2020, researchers at the American University of Beirut developed an AI-powered system that can personalize cancer treatment for individual patients. This system has the potential to make cancer treatment more effective and less toxic.

In 2021, researchers at the University of Jordan developed an AI-powered chatbot that can provide support to cancer patients. This chatbot can answer questions, provide resources, and offer emotional support. This chatbot has the potential to help cancer patients to cope with the emotional and physical challenges of cancer. As research continues, it is likely that AI will be used to develop even more innovative and effective cancer treatments.

Strategies of Cancer care in middle east

Recognizing the importance of palliative care in cancer management, various organizations, including the Middle East Cancer Consortium, have initiated training courses and workshops for healthcare professionals 15. These programs aim to provide updated training on palliative care and pain management to physicians, nurses, social workers, and psychologists throughout the region1. By equipping healthcare providers with the necessary skills and knowledge, these initiatives contribute to improving the quality of life for cancer patients and their families. Effective cancer care requires a multidisciplinary approach, and nursing professionals in the Middle East have embraced this concept. Collaborating with oncologists, surgeons, psychologists, and other

healthcare professionals, nurses ensure comprehensive and holistic care for cancer patients. This teamwork allows for a more thorough assessment of patients' needs and the development of personalized treatment plans 2 .

The Middle East has witnessed significant advancements in healthcare technology, and nursing professionals have been quick to adopt these innovations. From telemedicine and remote patient monitoring to electronic health records and advanced diagnostic tools, technology has revolutionized cancer care. Nurses utilize these advancements to enhance communication, monitor treatment progress, and provide timely interventions, ultimately improving patient outcomes. Cancer not only affects patients physically but also takes a toll on their mental and emotional well-being. Nursing professionals in the Middle East recognize the importance of providing psychological support and education to cancer patients and their families. Through counseling, therapy, and the promotion of self-care techniques, nurses play a crucial role in helping patients navigate the emotional challenges associated with cancer 3 .

Nursing professionals in the Middle East are actively involved in quality improvement projects and research initiatives to enhance cancer care. Cancer research is needed in the Arab world to provide evidence to healthcare workers and health policy makers 4. By collecting and analyzing data, nurses contribute to the development of evidence-based approaches and identify areas for improvement. These efforts lead to better patient outcomes and the continuous advancement of cancer care in the region.

Conclusion

The ME is currently involved in promoting its oncology and palliative nursing care services both at the hospital level and in the community. The existing needs have been established, and the time has come for recommendations for change to be put in place. The question that we face is as follows: in realistic terms, what would be the best feasible plan to start bringing about a change in the attitude of professional caregivers in light of the new paradigm of personalized care for cancer patients? The issue of modeling a practical intervention strategy has become a valid one. How are we going to proceed from here while recognizing the importance of local sensitivities toward any alteration in practices that have been in use for decades? We fully realize that each country in the region cares for its own unique cultural traditions and would like to preserve them during times of change.

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