COMPARISON OF HEALTH-PROMOTING BEHAVIORS FOLLOWING CANCER TREATMENT BETWEEN URBAN-RURAL ADULT PATIENTS WITH CANCER IN SAUDI ARABIA

Contents

1. Introduction

It is one of the most prevalent diseases and leading causes of death and disability in many countries, its rates are rising in line with other global health tendencies (WHO, 2024). WHO estimates that cancer caused nearly 10 million deaths in the year 2022 and constituted around 16 per cent of total global mortality (WHO, 2022). It is therefore estimated that worldwide cancer incidence will rise further with approximately 27.9 million new cases and 16.4 million deaths by 2040 (Bray et al., 2024). On this account, the above-presented rising trend of cancer is even more alarming, especially in the Middle Eastern region of Saudi Arabia. According to Alqahtani et al., (2020), Cancer is the second biggest killer in Saudi Arabia and breast cancer is the most prevalent among women and prostate cancer among the men. As shown in this statistic, they are caused not only by increased life expectancy of the population but also by the increase in rates of several risk factors, including diet, smoking, and physical inactivity, that are associated with cancer development (Alqahtani et al., 2020).

This increase in cancer incidence brings several problems to health care systems all over the world (Alsughayer et al., 2021). Although tremendous progress has been made in recent years in developing effective treatments for cancer, patients still have many problems, and the most important of these are related to the treatment's side effects. Tumour treatment by either chemotherapy, using of radioactive rays or any other related procedures leads to adverse effects on the bodies both physically and mentally, which include; tiredness, pains, depression and anxiety as stated by the National Cancer Institute in 2024. Many times such side effects cause a patient to suffer significantly and they cannot perform necessary activities like exercising, eating properly or handling stress (Wineman, Alia, & Anderson, 2020). Therefore, engaging in health-promoting behaviour (HPBs) has a significant part in the whole treatment and rehabilitation of cancer in patients (Peixoto et al., 2021).

Engaging health promoting behavioural consists of measures that can be taken by an individual for purpose of enhancing health, physical activity, dietary modification, smoking cessation, and utilization of support (Pender, 1996,2011).

In cancer patients, these behaviours can also decrease the manifestation of the side effects caused by treatment, support immune function, and improve psychological health (Peixoto et al., 2021). It has been found that patients carrying out exercise in the course of treatment benefits in overall well-being, increased physical exercise, better dieting measures in stress coping mechanisms (Nelson et al., 2023; Song et al., 2024). Although, people are capable of such behaviours they can only do so to certain extent depending with a number of factors for instance healthcare, social support and geographical locations. (Rowe et al., 2023)

A foremost problem in Saudi Arabia is the inequalities in the access to healthcare: rural residents remain inadequately served. Cancer treatment in urban areas seems to have good quality infrastructure in terms of cancer hospitals and specialists as compared to rural areas which are far from reach that have poor access to healthcare facilities, less no. of specialists and many more problems experienced in travel for treatment (Levit et al., 2020). These disparities are further reinforced by several factors including low rural health literacy and poor financial position of rural populace in accessing these facilities (Ali et al., 2024). They may also be less likely to practice health promoting behaviours that would improve their treatments and quality of life. It is against this background that this study seeks to find out how health promoting behaviours vary across geographical regions particularly amongst cancer patients in either urban or rural Saudi Arabia.

This research will thus seek to analyze and compare the health promoting behaviours of cancer patients receiving treatment in an urban and rural context in Saudi Arabia. Knowledge of these differences is crucial for designing health interventions that will help promote and facilitate recommended care for cancer patients, including those in the rural setting. Thus, the research objectives of the study are The research will explore the barriers and facilitators to adopting health promoting behaviours among urban and rural cancer patients so as to improve the current cancer care strategies for better compliance with Saudi Arabia Vision 2030 (Saudi Vision 2030, 2024).

2. Literature Review

2.1 Cancer Epidemiology

Global and Saudi Arabian Statistics: They concluded that it remains one of the most significant and increasing international health challenges. According to the 2022 GLOBOCAN data, there will be 27.9 million new cancer cases per year by 2040 up from 19.3 million recorded in 2020, with 16.4 million annual cancer deaths by 2040 up from 10 million in 2020 (Bray et al., 2024). Like all the other states of the world Saudi Arabia is not an exception to this phenomenon. Cancer is now the second most common cause of death in the country with each year registering more than 17,000 new cases (Alqahtani et al., 2020). The notable cancer types in KSA include breast cancer in women, colorectal cancer, prostate cancer and liver cancer and growing trends of lung and pancreatic cancer due to companies smoking and poor diet (Alessy, et al., 2024).

Types of Cancer in Saudi Arabia: Currently breast cancer is the most prevalent type of cancer in Saudi Arabian women contributing to 26 % of women cancer incidence and is followed by colorectal cancer which accounts for 10% of all the cancer cases in Saudi Arabia among women as noted by Alqahtani et al., (2020). Part by cancer type, the most common cancer in men is Prostate cancer with Colorectal and lung cancer trailing closely behind them (Bray et al., 2021). Several of the reasons for rising incidance of cancer have been attributed to lifestyle factors such as more intake of processed foods, more sitting and smoking (Alqahtani et al., 2020). Also, due to the increased aging population, as well as improved diagnostic centers, there has been increased incidence of cancer.

Treatment Services and Oncology Centers: There are many advanced cancer facilities in Saudi Arabia including King Faisal Specialist Hospital and Research Center; National Guard Health Affairs-King Abdullah Specialist Treatment hospital have specialized department of Oncology and provide all cancer treatments (Abusanad et al., 2022). However, on the one hand, large urban centres can boast infrastructural facilities, while on the other hand, rural areas might present certain issues for cancer sufferers, particularly when it comes to the specialist medical treatment they require; this might lead to a range of problems, which include delayed diagnoses and consequently – subpar therapy results (Al-Shamsi et al., 2022). Congregate rural patients travel exceptionally long distances just to access hospitals in

urban areas, which makes the process very expensive and emotionally and logistically demanding (Levit et al., 2020).

Side Effects of Cancer Treatment (Physical and Psychological): Chemotherapy and radiotherapy have many known side effects; these include fatigue, nausea, pain, and hair loss (National Cancer Institute, 2024). The physical changes may lead to decrease the patient's quality of life through the metabolic complications and impact their capability to perform healthy activities. Depression, anxiety and stress are also known symptoms as seen in Al-Jaffar et al., 2023 during treatment period. Counseling and strategies to cope with tension and stress for enhancing general and emotional health of patients during the therapy are important for mental health support of people diagnosed with cancer. (Lopez & Klainin-Yobas, 2021)

2.2 Healthcare System in Saudi Arabia

Socioeconomic Development and Vision 2030: The Kingdom of Saudi Arabia's Vision 2030 reform agenda for health care is about the future development of the health care sector and a better focused and organized overall health care system. This vision entails expansion of cancer care services and measures for early detection of; lifestyle based cancers (Saudi Vision 2030, 2024).

Healthcare Infrastructure: Saudi Arabia has always had a relatively developed healthcare, there are many contemporary hospitals and clinics in the kingdom, however in rural areas there is not always appropriate base for delivering high level of treatment for cancer. Al-Shamsi et al. (2022) argue that it demoralizes people to languish in rural locations without access to specialized oncological care for cancer treatment. Besides, rural patients feel challenges in accessing health education programs that may also be reduced by their capacity to perform health-promoting exercise (Abusanad et al., 2022).

Causes of Cancer in Saudi Arabia: The major risks factors for cancer in Saudi Arabia are smoking, obesity and lack of physical activity, all of which exist in this community. Some of the causes of cancer include; the ever growing uptake of chemical products and environmental pollutants with adequate information that indicates an upsurge in cancer cases (Alqahtani et al., 2020). While the government

supports health education programs for prevention of cancer, some of these causes are being tackled even if progress in the rural precincts has been rather slow**.** (AlJaffar et al., 2023)

Oncology Healthcare Services and Cancer Care Problems: However, thanks to the progress in modern services provision, Saudi Arabia has some issues, for instance, long waiting time for treatments, lack of oncologists in rural areas, and high cancer treatment costs (Abusanad et al., 2022). These problems influence both treatment effects and cancer patients' compliance with proper behavioural recommendations. Also, poor hospice or palliative care services essential for enhancing the quality of life in terminal stages of cancer patients are poorly developed, especially in the regions of a developed country other than the metropolitan cities (Alshammary et al., 2024).

2.3 Health Promotion Behaviours and Their Importance for Cancer Patients

There is need to prevent or control various illnesses and diseases through health promoting behaviours especially in cancer patients receiving treatment. Such behaviours include, taking balanced diets, taking exercise, not taking tobacco or alcohol, coping with stress and taking psychological help. Findings have also pointed out that engaging in health promoting behaviours during treatment can strengthen immune responses, decrease the impact of medication side effects and increase the patient's overall well-being (Peixoto et al., 2021). Based on Pender's Health Promotion Model (Pender, 1988), people, who perform health-promoting behaviours, are likely to have healthier results and enhanced wellbeing. (Bieyabanie & Mirghafourvand, 2020)

However, the capability of cancer patients to adopt these behaviours depends on other factors including the availability of the healthcare resources, social support and the degree of the symptoms experienced by patients with cancer (Song et al., 2024). Due to these factors, cancer patients in rural areas will have fewer health facilities to visit and mental health services to which they can accessibility plus they may not have adequate financial means necessitating them to deny their selves some health promoting behaviors they would otherwise be able to afford in urban areas (Nelson et al., 2023).

2.4 Rural Areas and Cancer Treatment Services in These Areas

A number of challenges relating to health disparities between urban and rural people influence cancer treatment in Saudi Arabia. There exists a challenge that rural patients take long times to get to centres offering cancer treatment that results in delay in diagnosis and treatment (Levit et al., 2020). Also, rural health care centres and hospitals lack adequate qualified oncologist as well as sophisticated medical equipment to adequately attend to cancer patients. These barriers are even worse for patients getting chemotherapy or radiotherapy which need frequent and sometimes even very frequent trips to urban hospitals (Bhatia et al., 2022).

Concerning health promoting behaviors, rural cancer patients are also at a disadvantage. Rural patients often have poor access to balanced diet, proper exercising equipments and psychological support services that may play a crucial role in enabling patients to observe good health status during treatment. These are compounded by revealing poor social support, loneliness, and lack of financial resources (Ali et al., 2024).

3. Gaps in the Literature

With the increasing interest in cancer care and health promotion, little is known about the disparity of health promoting behaviors between rural and urban cancer patients. While more attention is paid to cancer survivorship than cancer treatment, few studies investigate how rural cancer patients introduce health-promoting behaviors. More studies are required to identify the patterns of healthcare delivery, including access to medical and behavioral health, and the facilitators and barriers as experienced by rural cancer patients together with the ways through which these issues can be addressed.

4. Summary

Cancer is still a major health concern for Saudi Arabia and it affects this country in an equal way as it affects other nations, though there is large difference between rural and urban population in the country in terms of accessibility to cancer services and related care. An integral part of the cancer patient’s treatment and care is promotion of those behaviours that enhance health. Nevertheless, the rural patients experience

some barriers towards performing these behaviours for want of healthcare resources and assistance. As a result, this particular study proposes to investigate and compare the rates of HPEs of the cancer patients receiving treatment in the acute care hospitals at the urban and rural regions throughout Saudi Arabia to increase the effectiveness of the cancer care and supportive interventions continuing throughout the kingdom.

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