

Survey adult Oncology Patients' Experiences, Knowledge, and Attitudes with Nursing Care given throughout Radiotherapy Treatment in Saudi Arabia

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Abstract

There are few studies assessed the perception toward nursing practices during radiotherapy, and those too were based on females only. It is important to determine the needs of patients as perceived by themselves in order to achieve holistic approach to cancer treatment. Therefore, this study aims to assess the patients' knowledge, attitudes, and experiences on radiation therapy, as well as to identify areas where they perceive they need more information about and how oncology nurses can help them in such. This study will fill in the gap in information regarding the patients' perceived knowledge, attitudes and experiences on radiotherapy. The primary aim of this study is to assess Saudi adult oncology patients' knowledge, attitudes, experiences, and needs with radiation therapy and identify factors affecting such. More specifically, this study will: Identify patients' perception and their needs related to radiotherapy, explore their opinions of the quality of care given with their radiotherapy. Determine factors affecting participants' perceptions and opinions regarding the care given during radiotherapy and Correlate the participants' demographic background with their perceptions and opinions in care given during radiotherapy. This research using survey questionnaires to explore Patients' Experiences, Knowledge, and Attitudes with nursing care given throughout Radiotherapy Treatment. This work noticed that radiation therapy employs various applications of ionizing radiation in undermining the structure of cancer cells and treating tumours, whether by using radioactive isotopes and elements, or by generating high-energy radiation flux, and its shedding on tumour tissues and cells, with a view to permanently eliminating them, or reducing tumor mass to reduce its effects are at the very least. control might reflect the in vivo activation for producing of these cytokines from cells.

Keywords: Oncology; Radiotherapy; Nursing

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Introduction

Efforts are being made to ensure quality and holistic health care for cancer patients-including psychological and mental support. For radiation therapy, patients have identified that they experience some degree of anxiety and depression and that they are willing to seek help from health professionals. The experiences, knowledge, and attitudes of patients with their healthcare providers are fundamental factors of their quality of care. These perceptions are particularly vital for patients with cancer since they necessitate access to various specialists, efficient coordination of care, correct disease information and treatment options [1]. Cancer causes physical, emotional, and social stress to patients; and when stress becomes overwhelming, depression and anxiety follow which lead to poor compliance to treatment and engaging in drug use [2]. In fact, Muzzatti B, et al. (2016) demonstrated that 13.9% to 26% of cancer inpatients have shown depressive states [3]. In this regard, the National Cancer Policy Board of the Institute of Medicine has redirected their attention to exploring the perceived deficiencies in patient experiences and perception in relation to cancer care [4].

Recently, the American College of Surgeons Commission on

Cancer has increased the scope of patient care beyond just treatment standards. The standard of cancer patient care now includes supportive programs which will cater to enhance the patient's overall experience throughout the continuum of cancer health care delivery from initial evaluation and counselling, to palliative care, therapy navigation process, psychosocial distress screening, and survivorship care [5]. This is to ensure that patients directly benefit from all aspects of care.

In radiation oncology patients for example, 51% admitted having concerns on their level of anxiety and 34%, on their level of depression. Interestingly, majority of these patients, 92% were willing to discuss the matter with their generalist whilst 60% were willing to discuss with their oncologist [6]. This finding has two implications: that patients undergoing radiation therapy do experience some degree of psychosocial issues and that they want help from their health care service provider.

Mitchell G, et al. (1977) have found that cancer patients undergoing radiotherapy experience anxiety and their perception on radiation technologist as having satisfactory role in providing information regarding the treatment whilst the referring physician was perceived



to have insignificant role in preparing them for the experience of radiotherapy [7]. In more recent studies, patients express a certain level of expectation and appreciation to radiation technicians as well as oncology nurses who are providing them appropriate and timely information regarding their disease and/or treatment. They have identified that these health professionals could be their allies for emotional and psychological support as they undergo radiotherapy and even after treatment [8,9].

In a study by Halkett G, et al. (2012) in breast cancer patients undergoing radiotherapy, participants identified that they were most concerned about the effect of the therapy on their future health condition. Furthermore, they would want to be informed at the outset during treatment planning and before treatment begins [10].

Symptoms affecting quality of life immediately and long after radiotherapy differ amongst the various types and sites of cancer and the radiation therapy technique employed. For instance, in head and neck cancer survivors, significant improvement was achieved in the patients' physical functioning (speech, swallowing, mouth opening) [11]. For localized prostate cancer patients, urinary symptoms-both obstructive and irritative-were common and even worsened during radiation therapy [12]. Another study by Wong, in patients receiving whole-brain radiation therapy showed that certain side effects affected their overall quality of life. In a systematic review by Waller A, et al. (2014) involving studies that provided preparatory information cancer patients, such interventions improved patient-reported outcomes with regard knowledge and satisfaction [13]. Psychological outcomes and physical symptoms were also improved in other studies [14].

Furthermore, literature indicates that oncology nurses are usually mistaken when asked to anticipate their patient preferences and needs. Widmark-Petersson V, et al. (2000) showed the incongruence of nurses and patients in areas such as emotional distress, physical needs, and quality of life. These findings confirm that nurses' views may not align with their cancer patients and that their perceptions are paralleled with their professional interests and not of the patients [15].

Significance of the Study

Cancer is a major leading cause of death worldwide despite the awareness and preventive applied practices applied by community and health care settings. Ferlay J, et al. (2010) reported that nearly 12.7 million new cases and 7.6 million deaths had occurred worldwide due to cancer in 2008 while the Saudi Cancer Registry (SCR) (2006) reported the total number of cancer cases among Saudis was 8,054 [16]. Additionally, the patient-centered care approach entails taking of the patient in his/her social context wherein s/he is "listened to, informed, respected, and involved in their care...during their health care journey" [17]. Furthermore, only few studies assessed the perception toward nursing practices during radiotherapy, and those too were based on females only. Considering the pervious mentioned reasons, it is important to determine the needs of patients as perceived by themselves in order to achieve holistic approach to cancer treatment. Therefore, this study aims to assess the patients' knowledge, attitudes, and experiences on radiation therapy, as well as to identify areas where they perceive they need more information about and how oncology nurses can help them in such. This study will fill in the gap in information regarding the patients' perceived knowledge, attitudes, and experiences on radiotherapy.

Objectives of the Study

The primary aim of this study is to assess Saudi adult oncology

patients' knowledge, attitudes, experiences, and needs with radiation therapy and identify factors affecting such. More specifically, this study will:

- Identify patients' perception and their needs related to radiotherapy.
- Explore their opinions of the quality of care given with their radiotherapy.
- Determine factors affecting participants' perceptions and opinions regarding the care given during radiotherapy.
- Correlate the participants' demographic background with their perceptions and opinions in care given during radiotherapy.

Methodology

Research Design

This research utilized using a quantitative data regarding Saudi oncology patient information needs as well as their perceptions of cancer care quality will be obtained using survey questionnaires.

Population and Sample Size

For this study, 300 adult oncology patients from Jeddah City, Kingdom of Saudi Arabia undergoing radiation therapy treatment were selected by using convenient sampling technique. Criteria for inclusion into the study include adult patients, ages 21 years and above, Saudi citizen, diagnosed with any type of cancer within the previous five years and are currently undergoing radiotherapy treatment or have had radiotherapy in the past. Participants must be able to read, write, speak or understand the Arabic language, able to provide informed consent, have E-mail, and healthy enough to accomplish a survey questionnaire for approximately 45 minutes. On the other hand, participants were excluded if they do not speak or understand Arabic, are of other nationality have any physical or psychological impairment reported by a family member or the healthcare team that prevented them from accomplishing the survey questionnaire properly.

Survey Instrument

The survey instrument was designed to assess oncology patients' socio-demographic characteristics, informational needs, experiences, knowledge, and attitudes with radiation therapy and cancer care. The first section of the survey instrument extract pertinent patient demographics.

The second section of the instrument assess the informational needs of patients diagnosed with cancer with respect to radiation therapy. This part of the instrument is a modified version of the Toronto Information Needs Questionnaire-Breast Cancer (TINQ-BC) developed by [18]. In this study, the instrument was tailored specifically to address the research questions of interest, encompassing all cancer types, and focusing on radiation therapy treatment experiences. There are 39 items in this part of the survey and participants will be asked to rate the importance of each item on a Likert-type scale with 1 = "not important" through 5 = "extremely important." Participants can have a score of 39-195 with higher scores representing greater informational needs.

The third section of the survey instrument assess oncology patients' experiences, attitudes, and knowledge with radiation therapy and cancer care. Questions pertaining to the above variables were derived from the survey designed by Cleary P, et al. (1997). This section encompasses



34 questions, divided into domains. These questions will specifically address different aspects of care and radiation therapy in relation to patient perspective as problematic or not. Patients will be considered to have problems with care if they reported suboptimal responses [20,21].

Validity and Reliability

Content validity was established by consulting with mentors and oncology specialists. When deemed necessary, a pilot study of 30 Saudi oncology patients was conducted to elicit feedback and polish the questionnaire. Therefore, the reliability of the questionnaire was established utilizing the Cronbach's alpha test and was reported.

Data Collection Procedure

The data for this study were collected primarily through survey questionnaires specifically developed to address the research objectives. Prospective study participants were identified through the Oncology Centre database and were contacted via telephone. Inclusion and exclusion criteria were applied. Also, a formal invitation letter was sent through mail followed by a telephone call to qualified individuals. The mail was contained detailed study information, objectives, data collection process, why they are chosen as participants, the significance of the information sought, and the confidentiality of their information.

Once the individuals agreed to participate in the study, written informed consent were obtained, and the participant was assigned an identification code. The survey questionnaire was sent via mail or email, whatever they prefer. Along with the survey, questionnaire are other necessary forms like step-by-step directions and explanations on survey completion, the researcher's contact number for clarifications, et cetera. The participants were given enough time (approximately one week) to accomplish the survey questionnaire with the researcher undertaking a couple of follow-up reminders during the said period. Data collection for this study was run for a period of three to four months.

When the survey questionnaires were returned, the researcher reviewed its veracity and completeness. In cases of incomplete or incorrectly filled questionnaires, the researcher has had the option to call the participant for clarifications or if needed, re-send the survey questionnaire to the participant to be accomplished accordingly. This validation process took another week.

Data Management Analysis

Analysis of data proceeded in several phases using the most recent version of SPSS. Descriptive statistics were computed to assess patient demographics. Multiple regression procedures were utilized to establish a relationship between any demographic information with specific informational need and perceptions with care. For the data in the third section of the survey, the average problem scores in each domain were calculated as the percentage of answered questions for which patients reported problems with care.

Results

Radiation therapy is a type of cancer treatment that uses energy-intensive packages to kill cancer cells. Radiation therapy often uses X-rays, but protons or other types of energy can also be used. The term "radiotherapy" often refers to treatment with external beams. During this type of radiation, high-energy beams are released from a machine outside the body where the beams are directed to a precise point in the patient's body. During a different type of radiation therapy called cure therapy, radiation is placed in the patient's body. Radiation

therapy destroys cells by destroying the genetic material that controls cell growth and division. While both healthy and carcinogenic cells are destroyed, the goal of radiotherapy is to destroy as few natural healthy cells as possible. And normal cells can do more damage to radiation. The data of this article was collected from 3 hospitals providing radiation therapy, only surveys were used without interviews (Table 1).

When directing radiation to cancer cells, it eliminates them, where radiation is used segmentally or magnetic and directed towards the nucleus of cells, which leads to preventing them from reproduction and eliminating them gradually, but this treatment needs time because the death of the cells is slow, as experiments show that the body needs 4-8 weeks or more for some tumors after treatment to get rid of the tumor. Table 2 Shows the most common side effects from radiotherapy for Saudi patients (Figure 1).

Dosimetry is also needed to monitor individuals who may be exposed to radiation during their work or members of the public. In exceptional cases, such as nuclear or radiological accidents, dose assessments are equally important. In the field of measuring radiation protection doses, the accuracy requirements are not as stringent as in the area of medical dose measurement, but the correct tracking of measurements with a certain level of uncertainty is also an important factor. Refer to Table 3 that illustrate the radiotherapy information needs assessment and the widespread use of radiation applications to treat Cancer, which has significantly increased recovery rates and extended life span, is one of the most effective treatments for many tumors originating in most parts of the body.

Table 3 shows the Radiotherapy information needs assessment by Saudi patients and clearly it highlights how radiation therapy acts

Table 1: Shows the group age of the study participants which increases till age 60 then it decreases after age 60.

Age	%
21-30 years	22%
31-45 years	34%
46-60 years	39%
> 60 years	5%
Total	100%

Table 2: Illustration of the most common side effects from radiotherapy for Saudi patients.

Radiotherapy therapy Side effects	%
Skin problems	95%
Fatigue	93%
Dry mouth	88%
Nausea and vomiting	87%
Difficulty swallowing	83%

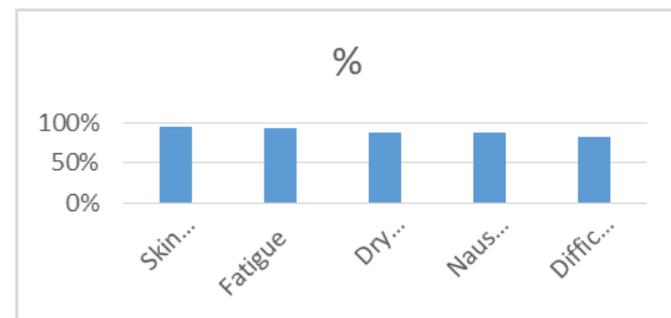


Figure 1: The most common side effects from radiotherapy for Saudi patients.



Table 3: Radiotherapy information needs assessment.

Important information for patients regarding radiotherapy treatment	%
How to prepare for radiation therapy treatment	93%
What will patients feel after radiation treatment	85%
Who to contact regarding questions whilst patient still getting treatment	91%
How radiation therapy acts on patient body	95%
ways to prevent or minimise side effects	92%
If there is cancer anywhere else in the patient body	87%
How the cancer and radiation treatment will affect patient life in the long run	85%
Family fully understands the nature of the patient disease	83%
Culture and religion influence patient decisions regarding diagnosis and treatment	89%
Patient concerned about dying	82%
Patient ability to continue their usual hobbies and sports	80%
Get help to deal with patient feelings about their illness	84%
What radiotherapy side effects should report to the doctors and nurses	88%
Information on how radiation therapy works against cancer	94%
The need for help taking care of patient whilst they are on radiotherapy treatment and after treatment	86%
What to do immediately after each session of radio therapy	88%
Which food the patient can or cannot eat	85%
Ability to continue usual social activities during or after radiotherapy	81%

Table 4: Patients perceptions regarding radiotherapy.

Patients perceptions regarding radiotherapy	Coordination of Care	%
The doctors, nurses, and other healthcare providers were familiar with patient recent medical history and diagnosis		96%
The doctors and oncology nurse's awareness regarding radiotherapy treatment		94%
The doctors and oncology nurse had all the information they needed, such as test results, to make decisions about radiotherapy treatment		95%
Knowing about the next step in care plan after radiotherapy completed		90%
Patients perceptions regarding their confidence in health team		%
Trust the doctors and oncology nurses with confidential information		97%
The doctors and oncology nurses treat patient with respect and dignity		98%
The doctors knew enough about treatments for cancers, specifically radiation therapy		95%
The oncology nurses knew enough about therapies for treating cancer, specifically radiotherapy		93%
Patients perceptions regarding radiotherapy treatment information		%
The doctor or oncology nurse discuss different treatment options for cancer beside radiation therapy		90%
doctor or oncology nurse inform patients about possible radiotherapy side effects		89%
Information regarding about changes in physical appearance		90%
Information regarding possible changes in patient sexual activity		86%
Information regarding possible changes in patient emotions		79%
Information regarding nutritional needs		89%
Information regarding changes in patient relationship with your spouse or partner		77%
Information regarding possible changes in patient work or usual activities		76%
Patients perceptions regarding radiotherapy involvement in treatment plan		%
Involvement in decisions about care as much as patient wanted		84%
The doctors and oncology nurses take to patient family regarding planning for radiotherapy treatment		87%
Patients perceptions regarding radiotherapy Symptom Control		%
The staff did everything they could to control the radiotherapy Sid effects		89%
The staff did everything they could to control patient pain and discomfort		91%
The staff did everything they could to control the patient nausea and vomiting		92%
The staff did everything they could to minimized the radiotherapy complications		85%

on patient body (95 %) and there is low concerns regarding ability to continue usual social activities during or after radiotherapy (81 %) Radiation therapy employs various applications of ionizing radiation in undermining the structure of cancer cells and treating tumors, whether by using radioactive isotopes and elements, or by generating high-energy radiation flux, and its shedding on tumor tissues and cells,

with a view to permanently eliminating them, or reducing tumor mass to reduce Its effects are at the very least. Traditionally, electronically generated X-rays are used as a source of radiation, in high-dose doses used by imaging devices, in addition to the use of other sources, such as gamma rays or the flow of neutrons or protons, or the electron beam.

The effectiveness of this treatment lies in the ability of radiation to destroy and break up the DNA with cancer cells, which is the chemical that carries genetic information and codes, and controls the vital processes necessary for reproduction and growth, and the performance of various cellular functions, and in general the cells that grow And reproduce at a rapid pace, like cancer cells, are more sensitive to the effect of radiation and more affected, and of course, take preventive measures during radiation treatment, in order to avoid exposure to the largest possible number of tissues and normal organs of radiation, and are usually protected using protective shields And with different patterns, and despite these precautions, some natural cells are affected by radiation, although they are generally able to recover with greater vitality, due to their ability to use the body's natural techniques to repair and restore damage to the DNA. Table 4 shows the patients perceptions regarding the radiotherapy.

Table 4 Presents patients' perceptions regarding radiotherapy in related to Coordination of Care, confidence in health team, treatment information, involvement in treatment plan and Symptom Control.

Conclusion

The article indicates that oncology nurses need to consider the perspectives of patients' experiences, knowledge, and attitudes with the nursing care given throughout Radiotherapy Treatment in Saudi Arabia. The oncology nurses need to anticipate their patient preferences and unique needs as well as showing the incongruence of nurses and patients in areas such as emotional distress, physical needs, and quality of life aspects. The main findings confirm that oncology nurses' views need further investigation to be aligned with their oncology patients and that their perceptions throughout radiotherapy treatment which might be paralleled with their professional interests and not the patients.

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