To Evaluate the Effectiveness of Awareness Program on Self Care Management among Patients Undergoing Radiotherapy

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Authors’ contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Cancer is one of the main life-threatening disease among all diseases. Besides a large number of care efforts dedicated to this disease in the health system, cancer also imposes high costs on society.

Aim of the Study: To evaluate the effectiveness of awareness program on self care management among patients undergoing radiotherapy.

Methods: In this, study participants are a head and neck cancer patient, Intervventional approach, The one group pre-test and post-test design. The head and neck cancer patient having an age group of more than 20 years will be included as per inclusion/exclusion criteria. The efficacy of the awareness program on management of self care in undergoing radiotherapy patients will be assessed by a structured knowledge questionnaire and perception questionnaire on radiotherapy. Each test having 20 items and the duration of the test will be 20 min. The pre-test will be assessed first day then the informational booklet on self care management undergoing radiotherapy will be provided to each patient and after seven days post-test will be assessed.

Expected Outcome: Primary outcomes include evaluation of the efficacy of awareness on self care management in patients undergoing radiotherapy. Secondary outcomes involve Association of...
Knowledge and perception score related to management of self care among radiotherapy receiving patients related to their demographic variable. 

**Conclusion:** The study will be drawn from the results and after that article will be published in the peer-review journal.

**Keywords:** Evaluate; effectiveness; awareness program; self care management; patients undergoing radiotherapy.

### 1. INTRODUCTION

Cancer is one of the main life-threatening diseases. Besides a large number of care efforts dedicated to this disease in the health system, cancer also imposes high costs on society [1].

Cancer is currently one of the worlds top cause of death. The World health organization declared that near range 1,685,000 new cancer cases and 595,000 mortality rate were reported in 2016. After heart related problem, cancer is the worlds second biggest cause of death [2].

Generally, several therapies are used to treat cancer, including surgery, radiotherapy, chemotherapy, hormone therapy, immunotherapy, which may be used on the patient simultaneously or at different times [3] Radiotherapy is considered a key component of cancer treatment [4]. More than 60% of all patients need this type of treatment during their illness. Depending on the tumors location, the type of radiation, energy level, and intensity of radiation show various side effects in different organs of the body [5].

Diagnosing and treating cancer disease leads to psychological problem and anxiety among cancer patients. Evidences such as some study indicates that the provision of data can be effective in reducing patient level of anxiety. Thus, cancer related specific data can having huge impact on cancer patient. The research examines the impact of an awareness program on self care management among cancer patients undergoing radiotherapy at the Cancer care centre [6].

### 2. NEED FOR STUDY

All characteristics for maintaining a person in a health status should be protected by health insurance. It is at least a form of sickness prevention and a deliberate attempt to maintain a healthy lifestyle. The cancer is one of the most deadly health issues facing mankind today. Among all the types the oral cavity cancer is common type in India due to cultural impact, ethnic factors, and geographical variables, as well as the prevalence of addictive behavior. The oral cancer mostly found in men and the third most oral cases found in women [7].

According to 2018, the worldwide rate of cancer incidence had increased and 18.1 million new cases and 9.6 million deaths occur. Among every five men one men having cancer and one in every six women in the world will develop cancer at some point in their lives. The overall number of persons those who living within 5 years of a cancer diagnosis, known as the 5-year prevalence, is projected to reach 43.8 million worldwide. Many factors contribute to the rising number of cancer cases, including the predominance of particular cancer causes linked to social and economic development. This is especially true in increasingly rising economies, where there is a change from poverty-related cancers and infections to lifestyle-related cancers more characteristic in developed nations. Effective preventive efforts can explain the decrease in the prevalence of cancers, such as lung cancer.

According to current statistics data, the actual number of diagnosed patients with cancer requiring treatment and cancer related care continue to rise in most countries. In Asia 2018, according to global trends of cancer, nearly all recent diagnosed cases and more over half of deaths due to cancer found in men and women, owing to the country’s population accounting for about 60% of the global population. The 9.0% accounts as the world population, The Europian country estimated 23.4% of worldwide cancer cases and 20.3% of mortality due to cancer. The proportion of cancer deaths is higher in Asian country and African country (57.3 percent and 7.3 percent respectively) than the proportion of incident cases of cancer (48.4 percent and 5.8 percent respectively) compared to other world regions, as these regions have a higher prevalence of such cases [8]. The role of radiation therapy in cancer patients palliative care was investigated by Stephen T and Edward Chow (2014). Radiation therapy has been shown to be a important and successful role in the
treatment of palliative cancers. After diagnosis of cancer and treatment of radiotherapy and its side effect it having the impact on patients mental health [9].

The objective is:

1. To assess the pre-test knowledge regarding self care management among patients undergoing radiotherapy.
2. To assess the pre-test perception regarding self care management among patients undergoing radiotherapy.
3. To evaluate the effectiveness of awareness program on self care management among patients undergoing radiotherapy.
4. To assess the post-test knowledge regarding self care management among patients undergoing radiotherapy.
5. To assess the post-test perception regarding self care management among patients undergoing radiotherapy.
6. To associate the knowledge regarding self care management among radiotherapy receiving patients related to their demographic variable.
7. To associate the perception regarding self care management among radiotherapy receiving patients related to their demographic variable.

3. METHODS

It is a scholarly review. The cancer hospital in the Vidarbha region will be the setting for this research.

3.1 Inclusion Criteria

- Patients (head and neck cancer) in a particular cancer hospital in the Vidarbha region who are undergoing radiotherapy and willing to take part in the study.
- Patients who are present at the moment the data is processed.
- Age more than 20 years.
- Head and neck cancer patient. (Irrespective radiotherapy receiving patient)
- Those can read and write Hindi, Marathi and English language.

3.2 Exclusion Criteria

- Head and neck cancer patients who have already attended a similar type of study before 6 months.
- Patients who have received past cancer therapies will be excluded from the study.
- Patients will be excluded who were critically ill and mentally ill etc.

3.3 Departure Pattern

Patients fulfill the below pattern they will withdraw taken away study:

1. Want to withdraw, taken away the project
2. Event of a critical illness
3. Not fulfilling study schedule

3.4 Sample Size

The previous study researcher taken 30 -100 sample or population.

For this type of study, the sample size of the study will be 60 cancer patients.

3.5 Outcome Efforts

The initial findings concern the interpretation of radiation patient knowledge and perceptive views about self care management among undergoing radiotherapy patient.

Secondary outcomes involve Evaluation of effectiveness of awareness program on self care management in undergoing radiotherapy patients and Association of perception and knowledge related to self care management in radiotherapy receiving patients related to their demographic variable.

3.6 Data Management and Knowledge Assessment

The demographic data (age, gender, monthly income, education, number of radiotherapy cycle completed) before conducting the knowledge assessment the consent taken from the patient and introduce ourself to the patient and after that structured knowledge questionnaire and perception questionnaire on self care management undergoing radiotherapy given to the patient. Structured knowledge questionnaire and perception questionnaire on radiotherapy contain 20 items and for 20 min duration.

3.7 Analysis

Research analysis will be conducted using version 23 of the Statistical Kit for Social Sciences software and version 7.0 of Graph Pad.
Descriptive statistics and inferential statistics are used for analysis in this study.

3.8 Reliability Analysis

By using the Pearson correlation coefficient method of reliability, hence knowledge and Perception tool is valid and reliable.

4. EXPECTED RESULTS

This study will show some cancer patients having poor knowledge and perception in the pretest and after the Awareness program on self care management, there will be an improvement in patients, knowledge level and perception regarding management of self care in those patients who were undergoing radiotherapy. These concepts are linked together to express the relationship. It includes Demographic variables, knowledge regarding self care management among patients undergoing radiotherapy.

Table 1. The knowledge score was categorized into

<table>
<thead>
<tr>
<th>Sr. no</th>
<th>Knowledge score level</th>
<th>Range of score</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Poor</td>
<td>1-5</td>
<td>0-25</td>
</tr>
<tr>
<td>2.</td>
<td>Average</td>
<td>6-10</td>
<td>26-50</td>
</tr>
<tr>
<td>3.</td>
<td>Good</td>
<td>11-15</td>
<td>51-75</td>
</tr>
<tr>
<td>4.</td>
<td>Very Good</td>
<td>16-20</td>
<td>76-100</td>
</tr>
</tbody>
</table>

Table 2. The perception score was categorized into

<table>
<thead>
<tr>
<th>Sr. no</th>
<th>Level of perception score</th>
<th>Range of score (%)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Disagree</td>
<td>1-20</td>
<td>1-20</td>
</tr>
<tr>
<td>2.</td>
<td>Strongly Disagree</td>
<td>21-40</td>
<td>21-40</td>
</tr>
<tr>
<td>3.</td>
<td>Neutral</td>
<td>41-60</td>
<td>41-60</td>
</tr>
<tr>
<td>4.</td>
<td>Agree</td>
<td>61-80</td>
<td>61-80</td>
</tr>
<tr>
<td>5.</td>
<td>Strongly Agree</td>
<td>81-100</td>
<td>81-100</td>
</tr>
</tbody>
</table>
5. DISCUSSION

In our best knowledge, not exactly but a similar study was done for Evaluating the knowledge level and perception related to management of self care among patients undergoing radiotherapy. The head and neck cancer patient was the participant in this study. The mean pre-test score of awareness was 8.93 and the mean post-test score of awareness was 26.03. In practice, 7.23 was the average pre-test score and the 16.36 was the post-test score. Average disparity suggests that the patients had insufficient experience of radiation therapy management and bad practice [7].

A study was done by A M Frydrich in 2013 on to evaluate the awareness and experience of patients with oral cavity cancer in treatment related to side effect of radiation therapy. Using knowledge questionnaires and physical tests data was obtained. The findings showed that the understanding among patients with oral cancer of managing the side effects of radiotherapy was poor, some patients had inappropriate experience of managing the side effects of radiation therapy [10]. Few of the related studies were reviewed [11-16].

Studer p., A perform review in 2011, To assess the effectiveness of a multifaceted information, education and communication package in controlling the side effects of radiation therapy in patients with oral cavity cancer. The four training units were held by the radiotherapy nurses and oncologist were attended by patients. The study findings showed, the level of patient understanding the treatment of radiotherapy side effects has been significantly improved [7].

In my study expected result will be in pretest the patient having poor knowledge and after the awareness program, the posttest knowledge and perception of the patient will be improved related to self-care management among patients undergoing radiotherapy.

6. CONCLUSION

Study findings will be drawn by using statistical analysis. The awareness program on self care management among cancer patients undergoing radiotherapy will be effective.

CONSENT

The demographic data (age, gender, monthly income, education, number of radiotherapy cycle completed) before conducting the knowledge assessment the consent taken from the patient and introduce ourself to the patient and after that structured knowledge questionnaire and perception questionnaire on self care management undergoing radiotherapy given to the patient.

ETHICAL APPROVAL AND DISSEMINATION

Ethical approval was obtained for the study topic from IEC, DMIMS (DMIMS (DU)/IEC/Dec-2019/8686). Those are involved in the study, will ask to read and willingly sign on the informed consent form. The study outcome will be disseminated to study participants and published in peer-reviewed publications.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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