“A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING SELF CARE AMONG CANCER PATIENTS UNDERGOING EXTERNAL RADIATION THERAPY IN SELECTED HOSPITALS.”

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Abstract - Cancer is one of the leading causes of death in the world today. Number of studies showed that one in three people will suffer from some form of cancer in their lifetime. There are many different kinds of cancer that affect different parts of the body. Some forms of cancer are curable, and some are not. Radiation therapy is one of the most common treatments for cancer. It is often part of the main treatment. Many other cancers are also treated with radiation therapy. A strong need to educate the cancer patients about the preventions of adverse effects of radiation therapy by taking self-care selected a study on the topic. The conceptual framework selected for the study was based on “General System Theory”. In view of the nature of the problem selected for the study and objective to be accomplished, quantitative approach was considered an appropriate research approach for the study. The study was conducted in selected hospital. Population of the study was 50 cancer patients undergoing external radiation therapy. Structured knowledge questionnaire was used to collect data. Non-probability purposive sampling technique was used. The data was planned to analyze on the basis of objectives and hypothesis of the study. Descriptive and inferential statistics were used for data analysis. The research was concluded with improved knowledge regarding self care among cancer patients undergoing external radiation therapy.

Key words: External radiation therapy, world Health Organization, Cancer, Hodgkin disease

Introduction - Radiation can be given alone or used with other treatments, such as surgery or chemotherapy. Radiation therapy uses high-energy particles or waves, such as X-rays, gamma rays, electron beams or protons to destroy or damage cancer cells. Acute reactions occur during or immediately after radiation.¹

Global Burden of Disease study shows that the number of cancer deaths has increased by 38% between 1990 and 2010, and if no concrete action is taken, it will further increase by 50% by 2030. Therefore, it has become important for every health-care worker to have a basic knowledge of cancer, its prevalence, and available treatment modalities. Unfortunately, the stigma associated with cancer acts a huge barrier on all fronts of cancer control. Owing to the lack of proper knowledge about cancer and its treatment, oncology interventions are often delayed. This gap in knowledge spans from layperson to the medical professionals and is more toward RT, which is often wrongly considered as too complicated, too expensive, and too toxic modality. In reality, radiation therapy is a very safe and effective modality for treating cancer with a potential to achieve the treatment goal in up to 70% cases. There is a significant lack of RT training and education in cancer patients undergoing external radiation therapy.² This gap in knowledge spans from layperson to the medical professionals and is more toward RT, which is often wrongly considered as too complicated, too expensive, and too toxic modality. In reality, radiation therapy is a very safe and effective modality for treating cancer with a potential to achieve the treatment goal in up to 70% cases. There is a significant lack of RT training and education in cancer patients undergoing external radiation therapy. In radiotherapy, cancer patients’ experiences of high quality of care are correlated with better patient education that is knowledge of radiotherapy. It is important to support patients’ empowerment with knowledge in order to assist decision making and understanding how to control own care in radiotherapy context of the technical issues and complexity. From this perspective, undertaking new patient education interventions to develop quality of care
is essential. It is recommended in international, European Commission 2014 and national health strategies as well, Ministry of Social Affairs and Health 2001, 2013. In 2018 WHO launched an initiative to save the lives of millions of children from cancer, and in 2019 we prequalified a biosimilar medicine for the first time, trastuzumab, saving the way for more women to have access to one of the most effective but most expensive breast cancer treatments. In 2020 WHO will present countries with a global strategy towards the elimination of cervical cancer, which kills one woman every two minutes, but is largely preventable, in 2016, there were an estimated 10.5 million 5-year cancer survivors, of who 3.05 million received radiation therapy The number of radiation-treated survivors is projected to reach 3.38 million by 2020 and 4.17 million by 2030. During the clinical posting, researcher found that the cancer patients are suffering from adverse effects of radiation therapy some of them which can be prevented. It was observed by the researcher that lack of knowledge among cancer patients undergoing external radiation therapy. Thus the researcher felt a strong need to educate the cancer patients about the prevention of adverse effects of radiation therapy by taking self-care selected a study on the topic.

Objectives:

1. To assess the pre-existing level of knowledge regarding self-care among cancer patients undergoing external radiation therapy.
2. To assess the effectiveness of structured teaching program on knowledge regarding self care among cancer patients undergoing external radiation therapy.
3. To find out the association between mean pre-test level of knowledge scores regarding self-care among cancer patients undergoing external radiation therapy with their socio demographic variables.

Description of the Tool: -

The tool constructed for the study has two parts:

Section A: Assessment of demographic variables
Demographic variables include Age, Gender, Religion, Educational qualification, Family history of cancer, history of bad habit (smoking, tobacco chewing), Occupation, Dietary pattern.

Section B: Consists of structured knowledge questionnaire regarding self-care among cancer patients undergoing external radiation therapy.

Research Design: Pre experimental one group pretest and post-test design was adopted to assess the effectiveness of structured teaching program on knowledge regarding self care among cancer patients undergoing external radiation therapy.

The findings of the study were grouped and analyzed under the following sessions.

Section A: Description of the demographic variables.

Section B: Assessment of pretest and post test level of knowledge regarding self care among cancer patients undergoing external radiation therapy.

Section C: Effectiveness of structured teaching program on knowledge regarding self care among cancer patients undergoing external radiation therapy.

Section D: Association of pre test level of knowledge regarding self care among cancer patients undergoing external radiation therapy with their selected demographic variables. The data analyzed by using mean, median, and standard deviation.

Result-

<table>
<thead>
<tr>
<th>Sr.no</th>
<th>Aspects</th>
<th>Max. Score</th>
<th>Knowledge Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>1</td>
<td>Pre-test</td>
<td>30</td>
<td>14.62</td>
</tr>
<tr>
<td>2</td>
<td>Post-test</td>
<td>30</td>
<td>23.68</td>
</tr>
</tbody>
</table>

Mean knowledge score of pre-test and post-test.

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Aspects</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Percentage</th>
<th>Paired “t” Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre – Test</td>
<td>14.62</td>
<td>3.04</td>
<td>48.73%</td>
<td>t=12.36814</td>
</tr>
<tr>
<td>2</td>
<td>Post – Test</td>
<td>23.68</td>
<td>3.53</td>
<td>78.93%</td>
<td>Df=49 p&lt;0.00001</td>
</tr>
<tr>
<td>3</td>
<td>Difference</td>
<td>9.06</td>
<td>0.49</td>
<td>30.2</td>
<td>Significant</td>
</tr>
</tbody>
</table>

(DF=49, level of significance 0.00001)
Pre-test level of knowledge score regarding self-care among cancer patients undergoing external radiation therapy was 48.93 % with mean and SD of 3.04. Post-test level of knowledge score regarding self-care among cancer patients undergoing external radiation therapy were 78.93% with mean and SD of 3.53, knowledge level in that in pre-test majority 38 (76%) people had moderately adequate knowledge and 12 (24%) people had inadequate knowledge regarding self care. Whereas in the post-test assessment after the structured teaching program out of 50 samples 42(84%) people had adequate knowledge, 8(16%) people had moderately adequate knowledge and nobody had inadequate knowledge.

Findings related to demographic variables of patients.
1) Age - Majority 18(36%) were aged between 41-50 years.
2) Gender - 26 (52%) were male and 24 (48%) were female.
3) Religion- Majority 16 (32) were Hindu religion
4) Family history of cancer – Majority 44 (88%) had no family history cancer.
5) Dietary pattern - Majority 32 (64%) eat mixed diet.
6) Bad habits (smoking, tobacco chewing) - Majority 34 (68%) not having bad habits like (smoking, tobacco chewing).
7) Educational qualification- Majority of 20(40%) having higher secondary education.
8) Habits of drinking alcohol- Majority of 34(68%) not having habits of alcohol drinking
9) Occupation- Majority of 26 (52%) doing other occupation.

In this study, it was observed from finding that the pre test 14.62 and post test 23.68 knowledge mean scores with difference 5.4 of there was definite improvement due to structured teaching program on level of knowledge on self care among cancer patients undergoing external radiation therapy.

Section C: Aspect wise pre and post knowledge score-Enhancement in score by percentage wise between pre test and post test knowledge score. Structured teaching 4(8%), unemployed 8(16%).

Discussion:
This chapter discusses in detail the findings of the study derived from the statistical analysis and its pertinence to the objectives of the study and further discussion will exemplify these objectives were satisfied by the study. The purpose of the study was to assess the effectiveness of structured teaching program on knowledge regarding self care among cancer patients undergoing external radiation therapy. The findings of the study discussed were based on the objectives as stated.

Description of the demographic variable among knowledge regarding self care among cancer patients undergoing external radiation therapy:
The table 1 shows that majority 18 (36%) were aged between 41-50 years, table no.2 shows that 24(48%) were female and 26 (52%) were male, table no.3 majority of religion Hindu 16 (32%), table no.4 majority of educational qualification of higher secondary 20 (40%), table no.5 had dietary pattern of patient mixed diet, table no.6 had 38(76%) had family history of cancer, table no.7 shows that majority of 42(84%), Bad habits of smoking tobacco chewing, table no.8 shows that majority of 31(62%) Drinking alcohol yes 12 (24%) and no 38 (76%), table no.9 Majority of other occupation 26 (52%), professionals 12(24%), Businessman.
The first objective was to assess the pre-existing level of knowledge regarding self-care among cancer patients undergoing external radiation therapy. The category-wise enhancement knowledge score shows that in the pretest, majority 38 (76%) had moderately adequate knowledge regarding self-care among cancer patients undergoing external radiation therapy, 12 (24%) had inadequate knowledge regarding self-care among cancer patients undergoing external radiation therapy whereas in the post test after the structured teaching program majority 42 (84%) had excellent knowledge regarding self-care among cancer patients undergoing external radiation therapy and 8 (16%) having moderately adequate knowledge regarding self-care among cancer patients undergoing external radiation therapy.

The second objective was to evaluate the effectiveness of structured teaching program on the level of knowledge scores regarding cancer patients undergoing external radiation therapy. In the pretest, the mean score of knowledge was 14.62 whereas in the post test the mean score of knowledge was 23.68. The calculated paired ‘t’ value of t 12.36814 was found to statistically significant at 0.05 levels. This clearly shows that the structured teaching program imparted to patients knowledge regarding self-care among cancer patients undergoing external radiation therapy.

The third objective was to find the significant association between the pretest levels of knowledge scores regarding self-care among cancer patients undergoing external radiation therapy with their selected socio-demographic variables. Association of selected demographic variables was none of the demographic variables had shown statistically significant association with pretest level of knowledge regarding self-care among cancer patients undergoing external radiation therapy. Demographic variables such as age in year, Religion, Educational qualification, occupation had shown statistically no significant association with pre-test level of knowledge regarding self-care among cancer patients undergoing external radiation therapy with their selected socio-demographic variables.

Hence the hypothesis $H_2$ stated earlier that “There is significant association between the pretest level of knowledge scores regarding self-care among cancer patients undergoing external radiation therapy.” is accepted for Gender, Dietary pattern, Family history of cancer, Bad habits’ (Smoking, tobacco chewing), Drinking alcohol. It had shown statistically significant association with pretest level of knowledge regarding self-care among cancer patients undergoing external radiation therapy with their selected socio-demographic variables. Hence the hypothesis $H_2$ stated earlier that “There is significant association between the pre-test level of knowledge scores regarding self-care among cancer patients undergoing external radiation therapy.” is accepted for Gender, Dietary pattern, Family history of cancer, Bad habits (Smoking, tobacco chewing), Drinking alcohol and habit of doing exercise and it is rejected for other variables.

Mean knowledge score of pre-test and post-test.

that the calculated value $t_{12.36814}$, df -49 was greater than the $p$ value at 0.05 level of significance. The mean difference between pre-test and post-test knowledge score was a true difference and not a chance difference. This indicates that the planned teaching was significantly effective on the level of knowledge regarding self-care among cancer patients undergoing external radiation therapy hence the research hypothesis $H_1$ was accepted.

References-

