

# A Descriptive Study to Assess the Knowledge regarding Radiotherapy among Family Members of the Cancer Patient in Selected Hospital, Bareilly

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**Abstract:** *The present study has been undertaken to A Descriptive study to assess the knowledge regarding radiotherapy among family members of the cancer patient in selected Hospital, Bareilly. A Quantitative approach was used for this study to test the knowledge regarding radiotherapy among family members of the cancer patient. In this study, research variables are the knowledge regarding radiotherapy among family members of the cancer patient. In the present study sample comprised of 30 family members of the cancer patient. the present study non - probability purposive sampling technique was selected and considered appropriate. The knowledge regarding radiotherapy among family members of the cancer patient under good category is 10 (62.74%) and excellent is 15 (90.64%).*

**Keywords:** Assess, Knowledge, Radiotherapy, Family Members, Cancer Patient, Methods

## 1. Introduction

One kind of treatment for cancer is radiotherapy. Intense energy beams are used in this treatment to eradicate cancer cells. X - rays are most frequently used in radiation therapy. However, there are other forms of radiation therapy, such as proton radiation. Radiation therapy is done precisely these days. They direct beams at the malignancy while shielding surrounding healthy tissues from radiation exposure. Radiation therapy can be administered externally or inside. Radiation therapy with an external beam is the most used type. A linear accelerator is a sizable device used in this treatment. The device directs high - energy beams at a specific location on your body. The genetic material of cells is destroyed by radiation therapy. The genetic code regulates the growth and division of cells. Radiation therapy may cause damage to both cancerous and healthy cells. However, compared to cancer cells, healthy cells can recover themselves more readily. Radiation therapy aims to treat the cancer with the least amount of damage to healthy cells.

Radiation therapy damages the DNA of cancer cells at high dosages, either killing the cells or slowing their growth. When DNA damage is irreversible, cancer cells either cease proliferating or die. The body breaks down and eliminates the damaged cells as they die. Radiation treatment does not immediately destroy cancer cells. Treatment must be administered for days or weeks before significant DNA damage results in the death of cancer cells. When radiation therapy is finished, cancer cells continue to die for several weeks or months.

Radiation therapy with an external beam is delivered to your malignancy by means of a machine. It's a big machine that might make noise. It moves about you without touching you and can transmit radiation in multiple ways to different parts of your body.

As a local treatment, external beam radiation therapy targets a particular area of the body. For instance, you will only receive radiation to your chest and not the rest of your body if you have lung cancer.

An internal radiation source is inserted into your body as part of an internal radiation therapy procedure. The source of radiation may be liquid or solid. Brachytherapy is the term for internal radiation therapy using a solid source. This kind of treatment involves inserting radiation - containing seeds, ribbons, or capsules into your body, either inside the tumor or close to it. Brachytherapy, like external beam radiation therapy, is a localized treatment that targets a single body component. Brachytherapy uses your body's own radiation source.

Cancer is treated and its symptoms are lessened using radiation therapy. Radiation therapy is a treatment that can eradicate cancer, stop it from coming back, or reduce its growth. Palliative care refers to therapies that are used to reduce symptoms. To treat pain and other issues brought on by the tumor, such as difficulty breathing or loss of bowel and bladder control, external beam radiation may be utilized to decrease the tumor. Radiopharmaceuticals, a class of medications used in systemic radiation therapy, are used to relieve pain associated with metastatic cancer to the bone.

Radiation can result in side effects that make eating difficult, like nausea, mouth sores, and esophagitis, a condition that affects the throat. During radiation therapy, your body expends a lot of energy healing itself.

You must consume enough protein and calories to keep your weight stable while undergoing treatment. Speak with your doctor or nurse if you are struggling to eat and stay at your current weight. It could also be beneficial to consult with a dietitian. See the booklet Eating Hints for additional information on managing eating disorders, or read up on side effects.

On the first day of your radiation treatments, you should be able to work. It's normal to feel weaker, more exhausted, and less energized as time goes on. It could take a few weeks after therapy is over for you to feel better, or it could take months. During your radiation treatment, there may come a time when you are too unwell to work. Find out if you are eligible for

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medical leave by speaking with your employer. Verify whether therapy will be covered by your health insurance during your medical leave.

**2. Objectives of the study**

- 1) To assess the knowledge regarding the management of selected side effects of radiation therapy among cancer patients.
- 2) To deliver Information, Education and Communication package among clients with cancer receiving radiation therapy.
- 3) To find out the association between selected demographic variables with knowledge and practice regarding the management of selected side effects of radiation therapy.

**Hypotheses set for the study**

**H1:** The knowledge regarding the management of selected side effects of radiation therapy among cancer patients will be significantly improved.

**H2:** There will be a positive co - relation between the knowledge scores in pretest and post test.

**Parameter of Question**

- 1) It comprised of Structure knowledge questionnaire on radiotherapy among family members of the cancer patient.
- 2) Knowledge related to radiotherapy among family members of the cancer patient.

- 3) Knowledge on need and importance of radiotherapy of the cancer patient.
- 4) Knowledge on method of radiotherapy.

**3. Review**

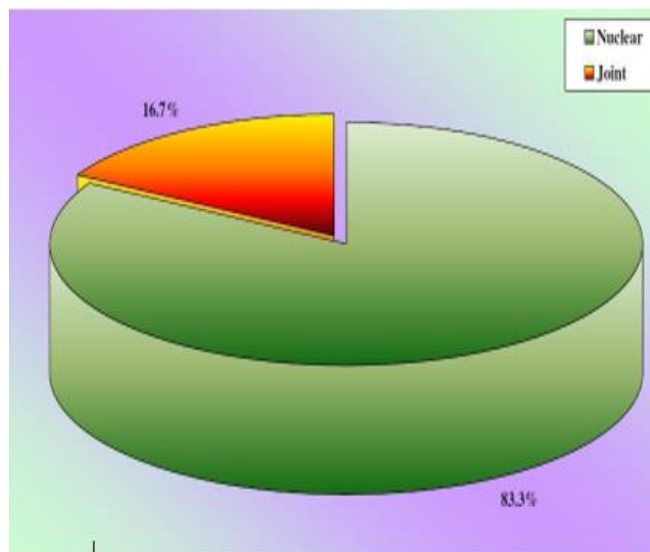
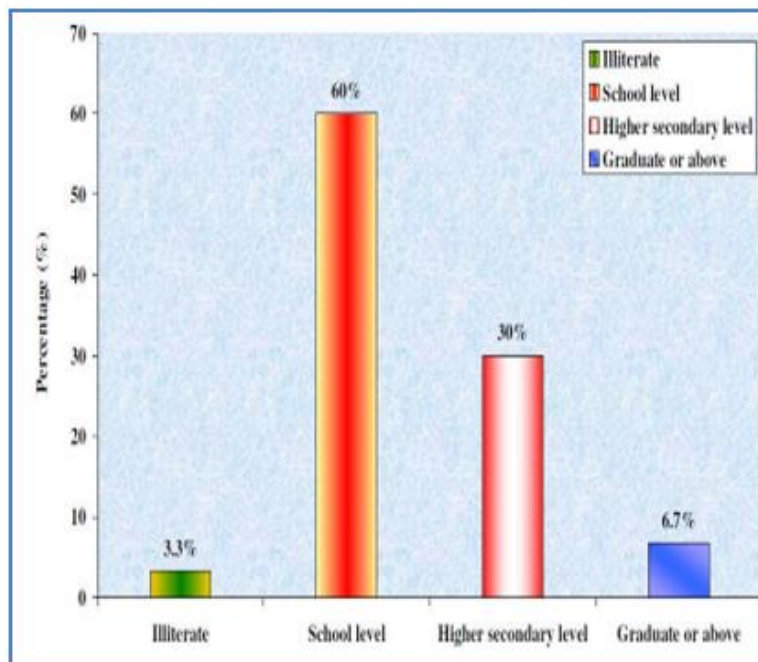
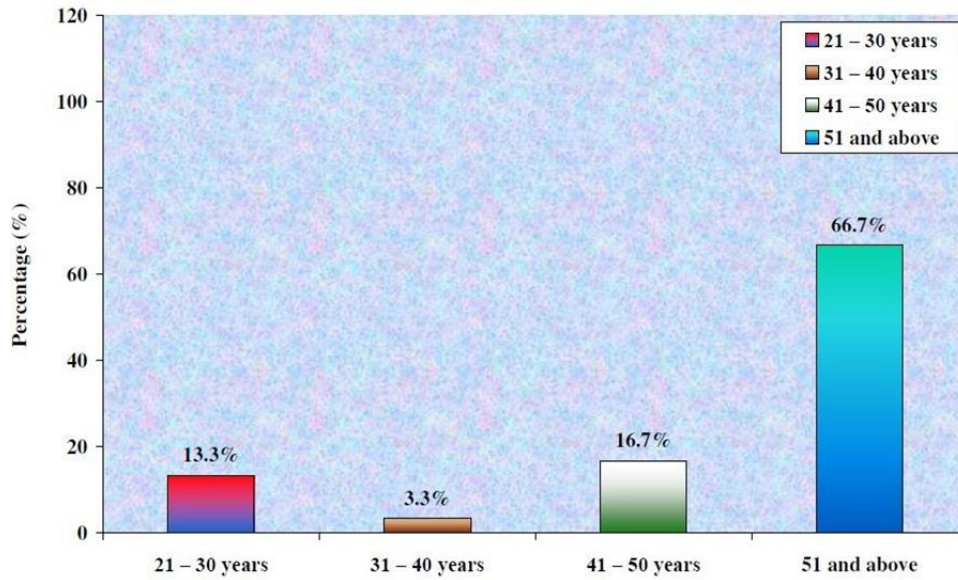
**Frydrich. A. M (2013)** conducted a study to assess the knowledge and practice of the oral cancer patients towards the management of side effects of radiation therapy. Data was collected by using questionnaires and physical examination. The results showed that the awareness of management of side effects of radiation therapy among patients with oral cancer was low and some patients had incorrect practice towards radiation therapy side effects management.

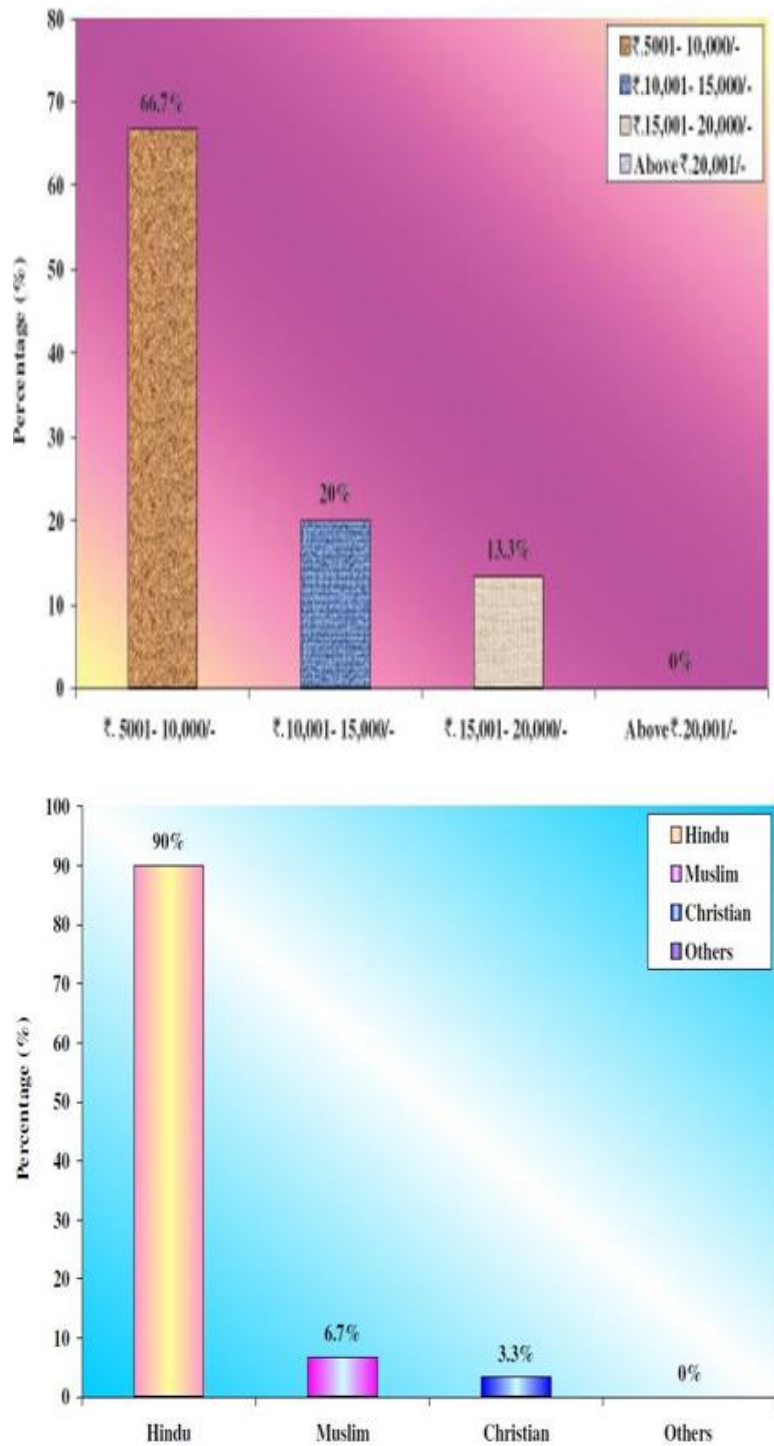
**Scheutz (2014)** conducted a similar study to assess the impact of IEC intervention on radiation therapy side effects management. The subjects were provided with repeated health education sessions and information about side effects management. After the intervention, it was found that the knowledge, and practice of the patients on radiation therapy management was improved significantly.

**4. Result**

Description of Demographic Variables of Patients with family members of the cancer patient, **n = 30**

S. No.	Demographic Variables	Above Mean	Below Mean	Degree of Freedom	$\chi^2$
1	<b>Age</b>			3	1.063
	a) 21 - 30 years	2	2		
	b) 31 - 40 years	1	0		
	c) 41 - 50 years	2	3		
	d) 51 and above	10	10		
2	<b>Sex</b>			1	0.02
	a) Male	10	11		
	b) Female	4	5		
3	<b>Type of Family</b>			1	0.715
	a) Nuclear	15	10		
	b) Joint	4	1		
4	<b>Occupation</b>			3	1.63
	a) Unemployed	2	2		
	b) Business	6	5		
	c) Professional	2	0		
	d) Others	7	6		
5	<b>Educational Qualification</b>			3	5.93
	a) Illiterate	0	1		
	b) School Level	6	12		
	c) Higher Secondary Level	6	3		
	d) Graduate or above	2	0		
6	<b>Monthly Income</b>			3	4.35
	a) Rs.5001 - 10, 000	8	12		
	b) Rs.10, 001 - 15, 000	5	1		
	c) Rs.15, 001 - 20, 000	1	3		
	d) Above Rs.20, 001	0	0		
7	<b>Religion</b>			3	0.72
	a) Hindu	12	15		
	b) Christian	1	1		
	c) Muslim	1	0		
	Others	0	0		



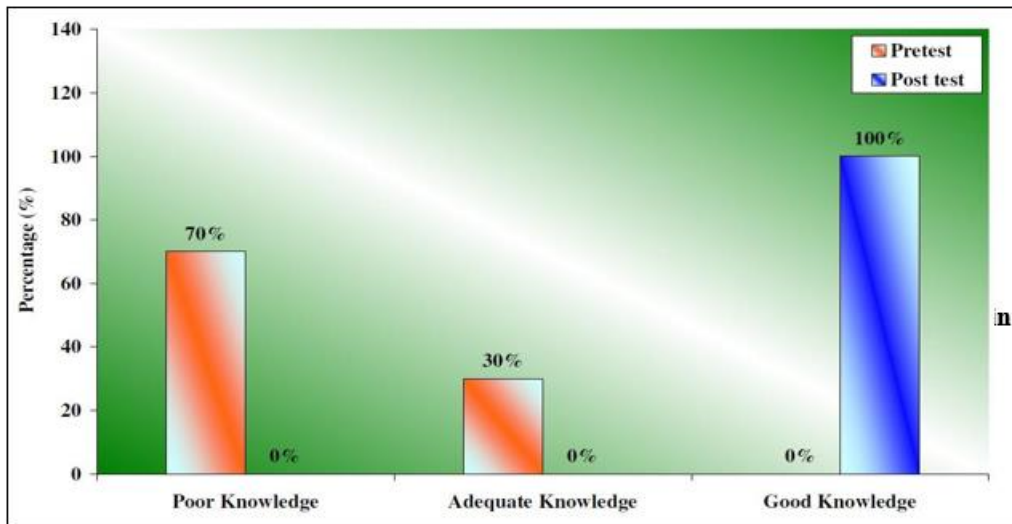


**Table 4.2:** Description of Pretest and Post test Level of Knowledge in Management of Selected Side Effects of Radiation Therapy Among Clients with Oral Cancer, n = 30

S. No.	Knowledge level	Pretest		Post test	
		f	%	f	%
1.	Inadequate Knowledge	21	70	0	0
2.	Moderate Knowledge	9	30	0	0
3.	Adequate Knowledge	0	0	30	100

It shows that among 30 patients with family members of the cancer patient, 21 (70%) had inadequate knowledge and 9 (30%) had moderate level of knowledge in pretest. In posttest, 30 (100%) gained adequate level of knowledge.



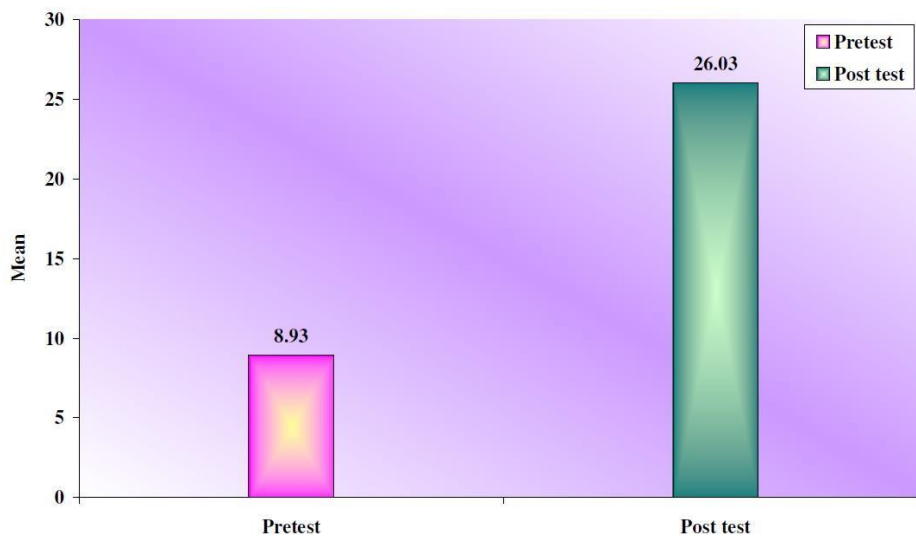


**Table 4.3:** Distribution of Statistical Value of Pretest and Post Test Knowledge Score in Management of Selected Side Effects of Radiotherapy n = 30

S. No.	Knowledge Score	Mean	S. D.	t - value	Level of Significance
1.	Pretest	8.93	4.01	20.29*	P<0.05
2.	Post test	26.03	2.46		

\*Significant

Table 4 shows that the calculated value of „t“ is 20.29 at 29 (df) which is greater than the table value (t=2) is significant at p<0.05 level of significance. Therefore, there is significant difference between pretest and posttest mean score.



**Table 4.4:** Association of Demographic Variables with Pretest Knowledge Score in Management of Selected Side Effects of Radiotherapy, n=30

S. No.	Demographic Variables	Above Mean	Below Mean	Degree of Freedom	$\chi^2$
1	<b>Age</b>			3	1.063
	a) 21 - 30 years	2	2		
	b) 31 - 40 years	1	0		
	c) 41 - 50 years	2	3		
	d) 51 and above	10	10		
2	<b>Sex</b>			1	0.02
	a) Male	10	11		
	b) Female	4	5		
3	<b>Type of Family</b>			1	0.715
	a) Nuclear	15	10		
	b) Joint	4	1		
4	<b>Occupation</b>			3	1.63
	a) Unemployed	2	2		
	b) Business	6	5		

	c) Professional	2	0		
	d) Others	7	6		
	<b>Educational Qualification</b>				
5	a) Illiterate	0	1	3	5.93
	b) School Level	6	12		
	c) Higher Secondary Level	6	3		
	d) Graduate or above	2	0		
	<b>Monthly Income</b>				
6	a) Rs.5001 - 10, 000	8	12	3	4.35
	b) Rs.10, 001 - 15, 000	5	1		
	c) Rs.15, 001 - 20, 000	1	3		
	d) Above Rs.20, 001	0	0		
	<b>Religion</b>				
7	a) Hindu	12	15	3	0.72
	b) Christian	1	1		
	c) Muslim	1	0		
	Others	0	0		

Table 4.4 shows the association of knowledge score with selected demographic variables by  $\chi^2$  test. The variables like age, sex, family type, education, occupation, monthly income and religion were not associated with the knowledge score in pretest.

## 5. Summary

Radiation therapy is used as an effective treatment for the management of various types of cancers. The radiation therapy also has some significant side effects which negatively affects the patient during their treatment programme. Most of the patients are unaware of these side effects and they sometimes think these all are the effects of their disease process. Awareness regarding the side effects of radiation therapy contributes greatly regarding its management. Thus, to increase the awareness about management of radiation therapy side effects, information about radiation therapy side effects can be incorporated in the information education and communication (IEC) components of all National Programmes.

The purpose of the study was to assess the knowledge regarding radiotherapy among family members of the cancer patient.

### Major Findings of the Study were as Follows:

- The pretest mean value of knowledge was 8.93
- The post - test mean value of knowledge was 26.03
- The obtained 't' value for comparison of knowledge score at  $p < 0.05$  level was 20.29
- The variables like age, sex, family type, education, occupation, monthly income and religion were not associated with the pretest knowledge score.

## 6. Conclusion

Information, Education and Communication package regarding radiotherapy was given to assess radiotherapy among family members of the cancer patient. The post test score of knowledge and practice were highly significant when compared to pretest score using the paired 't' test. Thus, the present study shows that the IEC package was effective in improving the knowledge radiotherapy among family

members of the cancer patient.

A t - test was found between the knowledge and practice score both in pretest and posttest when tested using descriptive method. This shows that the improvement in knowledge about the management of side effects of radiation therapy helps in developing favorable practice towards the management of side effects of radiation therapy among the Cancer patients. Hence the formulated hypothesis was accepted.

The association between the demographic variables and the pretest knowledge and practice was also found out by using the  $\chi^2$  test. The variables are not associated with the knowledge.

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