

Effectiveness of Planned Teaching Programme on Side Effects of Radiation Therapy Among Oral Cancer Patients

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ABSTRACT

Introduction: Oral cancer is among the top three types of cancers in India and it occurs due to severe alcoholism, use of tobacco in the form of cigarettes, chewing betel nut, human papilloma virus (HPV), poor dental care and poor diet. The side effects of radiation therapy can interfere with the patient quality of life and day to day functioning.

Aim: To evaluate the effectiveness of Planned Teaching Programme on Knowledge regarding Self-care management on side effects of radiation therapy among oral cancer patients.

Methodology: A quasi experimental two group pretestposttest design was selected. Purposive sampling technique was used to select 60 oral cancer patients out of which 30 were assigned to experimental and 30 were assigned to control group. Both the groups were assessed for their knowledge on self-care management on side effects of radiation therapy using interview schedule. A planned teaching program was administered only to the experimental group but not to control group. After a month, posttest was conducted using same tool from both groups. Results: The mean pretest knowledge score of experimental group was 13.5 with SD of 4.1, where as in control group the mean pretest knowledge score was 12.7 with the SD of 3.6 and the t value of pretest knowledge score was 0.130 and the mean posttest knowledge score was 27.1 with SD 2.2, where as in control group the mean post test knowledge score was 12.9 with standard deviation 3.2 and the t value of post test knowledge was 0.00 and the difference was found in experimental group was 14.2.

Conclusion: Radiation therapy plays a significant role in cancer therapy. As a result, various changes are induced in oral tissues. The resulting sequelae cause substantial problems and may affect the patient's quality of life. Larger prospective trials that include the prevention and treatment of radiation-induced damage to oral tissues are needed to improve management in side effects to enhance better prognosis.

Key words: Oral cancer patient; self-care management; side effects; radiation therapy.

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INTRODUCTION

Cancer is a group of disease involving abnormal cell growth with the potential to invade to other parts of the body. The common types of cancer are Breast cancer, prostate cancer, lung cancer, pancreas cancer, colon cancer, head and neck cancer¹. Oral cancer is among the top three types of cancers in India and it occurs due to severe alcoholism, use of tobacco in the form of cigarettes, chewing betel nut, human papilloma virus (HPV), poor dental care and poor diet².

The treatment for cancer includes chemotherapy, radiation therapy and surgery. The radiation therapy is used to shrink tumours and kill cancer cells.³ The common side effects of radiation therapy include dry mouth, red and sore mouth, trouble swallowing, damaged taste buds, tiredness, skin irritation and teeth erosion or cavities⁴. The side effects of radiation therapy can interfere with patient quality of life and day to day functioning.

An effectiveness of easy-to-read pamphlets on knowledge regarding self-care management on side-effects of radiation therapy was conducted at urban oncology clinic, Canada. The results revealed that pamphlet was effective in increasing knowledge scores among literacy patients. The study concluded that, oncology nurses should use innovative teaching strategies to improve patient understanding and self-care behaviours to manage side effects of radiation therapy⁵.

The present study aimed to evaluate the effectiveness of planned teaching programme on knowledge regarding self care management on side effects of radiation therapy among oral cancer patients at Indian setting.

METHODOLOGY

This study was based on Ludwig Von Bertalanffy's general system theory. A quasi experimental two group pre-test - post- test design was used. Based on objectives of the study, a structured knowledge questionnaire and lesson plan on

self-care management on side effects of radiation therapy was prepared in English and then it was translated to Kannada since the study participants' communication and understanding were only in Kannada. The tool and teaching plan were validated by research and subject experts for adequacy and appropriateness. After obtaining an ethical clearance from an institutional ethics committee, a written permission was obtained from Medical Superintendent of R.L. Jalappa Hospital and Research centre, Tamaka, Kolar.

Using purposive sampling technique, 60 oral cancer patients were selected. Of the total, 30 were allotted to experimental and 30 were allotted to control group with an inclusion criteria of oral cancer patients who were undergoing for radiation therapy, willing to participate in the study and able to understand and communicate in Kannada or English language. Written consent was obtained from all study participants. The pre-test was conducted to both groups of oral cancer patients through interview schedule on one to one basis to assess their knowledge on self-care management on side effects of radiation therapy followed by a planned teaching program on management on side effects of radiation therapy only to the experimental group in Kannada by using power point presentation, charts, pamphlets and flash cards. After one month, post-test was done for both experimental and control group by using same questionnaire.

RESULTS

I. Socio-demographic variables of oral cancer patients

Majority (53% in experimental and 33% in control group) of oral cancer patients were belonged to the age group 55 to 64 years, most (50% in experimental and 63% in control group) of them were females, majority (90% in experimental and 96% in control group) of them were Hindus, most (70% in experimental and 63% in control group) of them were illiterates, 73% of them in both groups were farmers, 57% in experimental and 60% in control group were belongs to low income group.

majority (77 % in experimental and 57% in control group) were from joint family and 90% of them in experimental and 85% in control group were from rural area.

II. Pre-test knowledge score of oral cancer patients

The knowledge score was grouped under an adequate knowledge (above 75%), moderately adequate knowledge (50-75%) and inadequate knowledge (score less than 50%) and presented in figure 1, which shows that majority (63% in experimental group and 76% in control group) of oral cancer patients had inadequate knowledge, 37% in the experimental group and 24% in control group had moderately adequate knowledge and none of them either in the experimental group or control group had adequate knowledge.

III. Effectiveness of planned teaching programme on knowledge on side effects of radiation therapy among oral cancer patients

Difference of overall pre and post-test mean knowledge score of oral cancer patients within the group was done. The overall mean pre-test knowledge score was 13.5 and in post-test it was 27.1. The paired "t" test value (15.62, p=0.000) was found to be significant. In control group the overall mean pre-test knowledge score was 12.7 and in

post-test it was 12.9. The unpaired "t" test value was 0.26 indicating that there was no significant difference between pre and post test knowledge scores in the control group. This indicates that structure teaching programme was effective in improving the knowledge score in experimental group than the control group and the same is presented in table-1.

There was no significant difference in the overall mean pre-test knowledge score in experimental group (mean=13.5) and the control group (mean=12.7). The unpaired paired "t" test value was 0.83 which was not significant. This indicates that the groups were homogenous in terms of their pretest knowledge scores.

The overall post- test mean knowledge score in experimental group was apparently higher (mean=27.1) than the control group (mean=12.9). The student "t" test value was statistically (20.8, p<0.001) indicating that, there was a significant difference between experimental and control group scores which were statistically significant at 0.001 level. (Table-2)

IV. Association of knowledge score with socio-demographic variables of in experimental group and control group

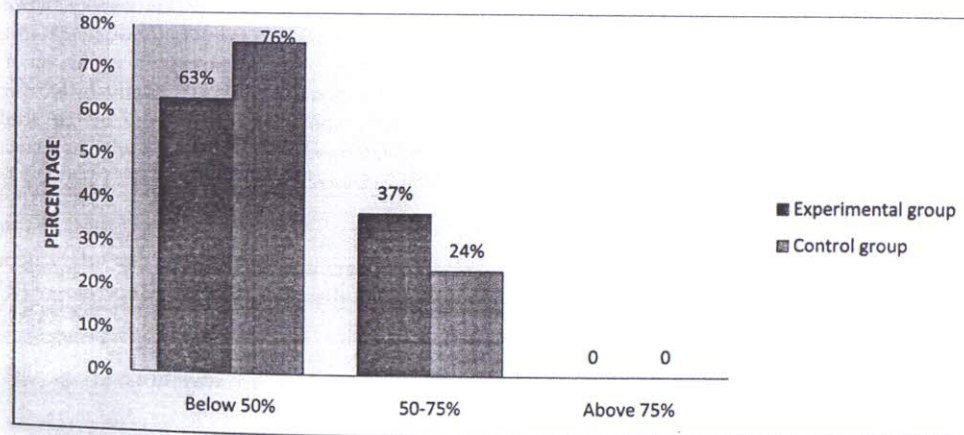


Fig-1: Percentage distribution of oral cancer patients according to Level of knowledge

Table 1: Mean, SD, Paired t value of pre-test and post-test knowledge scores of oral cancer patients within group

Group		Pre-test	Post-test	paired "t" value	p value
Experimental group	Mean	13.5	27.1	15.62	0.000*
	SD	4.1	2.2		
Control group	Mean	12.7	12.9	0.26	0.171
	SD	3.6	3.2		

**Statistically significant at 0.001 level

TABLE 2: Mean, SD, unpaired t value of knowledge score between groups.

VARIABLES		Experimental group	Control group	"t" Value	p Value
Pre test	Mean	13.5	12.7	0.83	0.130
	SD	4.1	3.6		
Post test	Mean	27.1	12.9	20.8	0.000**
	SD	2.2	3.2		

**Statistically significant at 0.001 level

The association of knowledge score with its socio-demographic variables revealed that there was no significant association between age, gender, religion, educational status, occupation, family income, type of family and place of residence with knowledge score in experimental group.

Similarly there was no significant difference between the knowledge score and its socio-demographic variables such as age, gender, religion, educational status, occupation, family income, type of family and place of residence in the control group.

DISCUSSION

The present study was intended to assess the effectiveness of planned teaching program on Knowledge regarding Self-care management on side effects of radiation therapy among oral cancer patients receiving Radiation therapy at Kolar. The

findings on socio-demographic variables of oral cancer patients revealed that majority of study participants belonged to the age group of 56-64 years, most of them were females, illiterate belongs to joint family with low socio-economic background and also farmers. It was supported by the study on Socio Demographic profile on oral cancer patients residing in Tamilnadu- A Hospital based study showed that majority of the study subjects belonged to the illiterates with low socioeconomic classes⁶.

The overall mean pre-test knowledge score of experimental group was slightly higher (mean=13.5) than the control group (mean=12.7). The t value of pretest knowledge score was 0.13. The overall post-test mean knowledge score of experimental group was apparently higher (mean=27.1) than the control group (mean=12.9). The t value of post-test knowledge was 0.00. This

indicates that structure teaching programme was effective in improving the knowledge score in experimental group than the control group. This finding is supported by the study conducted on Knowledge, attitude and Practices among women with oral cancer patients receiving radiation therapy in India revealed that planned teaching program was effective in improving the knowledge score among women with oral cancer⁷.

LIMITATIONS

The study was limited to the oral cancer patients admitted and receiving radiation therapy at R.L. Jalappa hospital and research centre, Kolar.

CONCLUSION

Radiation therapy plays a significant role in cancer therapy. As a result, various changes are induced in oral tissues. The resulting sequelae cause substantial problems and may affect the patient's quality of life. Larger prospective trials that include the prevention and treatment of radiation-induced damage to oral tissues are needed to improve management in side effects to enhance better prognosis.

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CONFLICT OF INTEREST: None

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