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RESEARCH ARTICLE

“A PRE-EXPERIMENTAL STUDY TO EVALUATE THE IMPACT OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING MANAGEMENT OF COMMON SIDE EFFECTS OF CHEMOTHERAPY AMONG CANCER PATIENTS ADMITTED AT SHER-I-KASHMIR INSTITUTE OF MEDICAL SCIENCES SOURA SRINAGAR KASHMIR”

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Abstract

Cancer is a disease of the cell in which the normal mechanism of the control of growth and proliferation has been altered. It is invasive spreading directly to surrounding tissue as well to new sites in the body. According to Indian Council of Medical Research (ICMR) in 2016 the total number of new cancer cases was expected to be around 14.5 lakh and the figure is likely to reach nearly 17.3 lakh new cases in 2020. Over 7.36 lakh people were expected to succumb to the disease in 2016 while the figure is estimated to shoot up to 8.8 lakh by 2020. One way to stop the cancer from growing is to interfere with the cancer cell ability to multiple. There are several methods being utilized, in which chemotherapy is an important modality in cancer treatment. Every treatment has got its own merits and demerits for the cancer patient who is at the receiving end. The Common side effects of chemotherapy include mucositis, nausea, vomiting, taste changes, alopecia and fatigue. So, one should understand the condition of these patients.

Aim: To investigate the impact of structured teaching programme on knowledge regarding management of common side effects of chemotherapy among cancer patients admitted at Sher-I-Kashmir Institute of Medical Sciences Soura Srinagar Kashmir.

Methods: Quantitative research approach and pre-experimental one group pre-test post-test design was used. Purposive sampling technique was used to select the sample, that were 50 cancer patients admitted in Medical oncology and Hematology wards of SKIMS Hospital Srinagar Kashmir respectively. Data was collected by using Structured Interview Schedule.

Results: The result of the study showed that the posttest (Mean±SD) knowledge score of the study subjects was (47.48±3.710) which was significantly higher than the mean pretest knowledge scores (29.78 ±5.281) of study subjects at 0.05 level of significance. This indicates that structured teaching programme was effective in increasing the knowledge score of patients regarding management of common side effects of chemotherapy. The association of demographic variables with pre-test knowledge scores was analyzed by using Chi square test,

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which revealed that there was significant association between pre-test knowledge score and educational status ($p=0.001$) at 0.05 level of significance and no association was found with other demographic variables i.e. age, gender, residence and duration of illness.

Conclusion: The findings of the study concluded that in the pre-test patients were having satisfactory knowledge regarding management of common side effects of chemotherapy. The mean post-test knowledge score increased after administration of structured teaching programme indicating that structured teaching programme was effective in improving knowledge of patients regarding management of common side effects of chemotherapy.

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Introduction And Background Of The Study:-

The term cancer, neoplasm and tumor are often used interchangeably by both professionals and the lay public. Strictly speaking, these words are not interchangeable. Although generally used as a synonym for cancer, the word tumor simply refers to a lump, mass, or swelling. That swelling can be neo plastic mass, or it may be only an accumulation of fluid. The word neoplasm is (derived from Greek word neos, “new” and plasis, “molding”) defined as an abnormal mass of tissue that serves no useful purpose and may harm the host organism. A neoplasm can be either benign or malignant. A benign neoplasm is usually harmless growth that does not spread or invade other tissue. A benign tumor does occupy space. Consequently, if it is located near a vital organ, it can be fatal, as with a benign brain tumor. A malignant neoplasm is a harmful mass, capable of invasion of other tissues and metastasis to other distinct organs. The term cancer is used to refer to malignant neoplasms. Cancer is a disease of the cell in which the normal mechanisms of the control of growth and proliferation have been altered. It is invasive spreading directly to surrounding tissue as well to new sites in the body.¹

Cancer is among the most common causes of morbidity and mortality worldwide, with approximately 14 million new cases and 8.2 million cancer related deaths in 2012. The number of new cases is expected to rise from 14 million in 2012 to 22 million within the next 2 decades.² A total of 1.1 million new cases of cancer are projected to have been diagnosed in India each year. The cancer mortality rate in India is high, at 68% of the annual incidence. This ratio indicates that fewer than 30% of Indian patients with cancer survive five years or longer after diagnosis. Even though the incidence of cancer is projected to be marginally higher in females than in males, projections suggest that death due to cancer in males is noticeably higher.³

A cross sectional study was conducted between January 1, 2009 and December 31, 2011 at SKIMS SOURA, which is a cancer referral center for the entire Kashmir valley, and has recently acquired the status of a regional cancer center through the National Cancer Control Program (NCCP). Only the cases histologically confirmed as cancer were included in this study. Descriptive statistics was obtained from well-maintained files of patients from the Hospital Based Cancer Registry, Kashmir. Medical records of all these patients were analyzed. Out of 8648 patients who were diagnosed with cancer, 5174 (59.82%) were males and 3474 (40.17%) were females, with a male to female ratio of 1.5:1. In both the sexes combined, cancer of esophagus was the most common cancer, and was found in 1221 (14.11%) patients (699 males and 522 females) with a median age of 63 years for males and 60 for females. When analyzed separately for both the sexes, it was the most common cancer among females, and second most common cancer among men, and was only superseded by lung carcinoma in the latter. Lung cancer was observed in 903 (17.4%) male patients, with a median age of 60 years. In females, this cancer was fifth in order. Stomach cancer was recorded in 776 (9%) patients (590 males and 186 females) with a median age of 55 years for males and 60 years for females. Also, this was the third most common cancer in men and sixth most common in women. Colorectal carcinoma was fourth most common cancer in males and held a third rank amongst the female population. It was found overall in 616 (7%) patients, (342 males and 274 females) with a median age of 53 years in males, and 50 years for females.⁴

One way to stop the cancer from growing is to interfere with the cancer cell ability to multiple. There are several methods being utilized, in which chemotherapy is an important modality in cancer treatment. The first drug used for cancer chemotherapy did not start out as a medicine. Mustard gas was used as a chemical warfare agent during World War 1 and was studied further during World War 2. During a military operation in World War 2, a group of

people were accidentally exposed to mustard gas and were later found to have very low white blood cell counts. Doctors reasoned that something that damaged the rapidly growing white blood cells might have a similar effect on cancer. So, in the 1940's several patients with advanced lymphomas were given the drug by vein, rather than by breathing the irritating gas. Their improvement although temporary was remarkable. That experience lead researchers to look for other substances that might have similar effect against cancer. As a result, many drugs have been developed.⁵

Objectives Of The Study:-

- 1 To assess the pre-test knowledge score of cancer patients regarding management of common side effects of chemotherapy admitted at Sher-I-Kashmir Institute of Medical Sciences Soura Srinagar Kashmir.
- 2 To assess the post-test knowledge score of cancer patients regarding management of common side effects of chemotherapy admitted at Sher-I- Kashmir Institute of Medical Sciences Soura Srinagar Kashmir.
- 3 To evaluate the impact of structured teaching program on knowledge regarding management of common side effects of chemotherapy by comparing pre-test and post-test knowledge scores among cancer patients admitted at Sher-I-Kashmir Institute of Medical Sciences Soura Srinagar Kashmir.
- 4 To determine the association between the pretest knowledge score and the selected demographic variables i.e. age, gender, educational status, residence, duration of illness among cancer patients admitted at Sher-I-Kashmir Institute of Medical Sciences Soura Srinagar Kashmir.

Hypotheses:

H₁: There is significant increase in mean post-test knowledge score as compared to the mean pre-test knowledge score among cancer patients regarding management of common side effects of chemotherapy at 0.05 level of significance.

H₂: There is significant association between pre-test knowledge scores among cancer patients regarding management of common side effects of chemotherapy with their demographic variables i.e. age, gender, educational status, residence, duration of illness, at 0.05 level of significance.

Material And Methods:-

Research approach and design:

A Pre- experimental one group pre-test and post-test design was used for the study.

Table 1:- Schematic Representation of the Research Design.

Group	Pre-test	Intervention	Post-test
50 Cancer patients	O ₁	X	O ₂

Where:

1. O₁ is knowledge score of patients before implementation of structured teaching programme (pre-test).
2. O₂ is the knowledge score of patients after implementation of structured teaching programme (post-test).
3. X is the intervention (structured teaching programme).

Sample and Sampling technique:

The sample for the present study is comprised of 50 cancer patients irrespective of any type of cancer admitted at SKIMS hospital Srinagar from 21/8/2017 to 18/09/2017. The purposive sampling technique was adopted to select the sample for the present study.

Description of the tool:

Structured interview schedule was used as the research tool. It was divided in two sections.

Section I:

Demographic data related to cancer patients includes; age of patients, gender, educational status, residence, & duration of illness.

Section II:

Deals with knowledge assessment regarding managements of common side effects of chemotherapy which includes;

Items regarding general aspects of chemotherapy, items regarding side effects of chemotherapy, items regarding management of side effects of chemotherapy.

Data collection procedure:

Informed written consent was obtained from the study subjects to confirm their willingness to participate. The data was collected individually from the subjects through administration of interview schedule which was translated into the local language i.e. Kashmiri. The average time taken for conduction of pre-test per patient was 20-25 minutes. The same procedure was followed for all the 50 patients until full data was collected. Structured teaching programme was administered individually to subjects for 30-35 minutes per subject on the same day of pre-test. The subjects were post-tested on every 3rd day of intervention following the same procedure as in the pre-test. The time duration for the post-test per study subject was 15-20 minutes. 2-3 subjects were taken on every day and same schedule was used for data from other study subjects. The results of the data were recorded in the master data sheet and analysed by using descriptive and inferential statistics.

Ethical considerations:

The researcher has taken permission from the parent institution (Sher-I-Kashmir Institute of Medical Science and Madre-e-Meharban Institute of Nursing Sciences and Research) to conduct research study and ethical clearance was obtained and study was found ethically exempted

Results Of Present Study:-

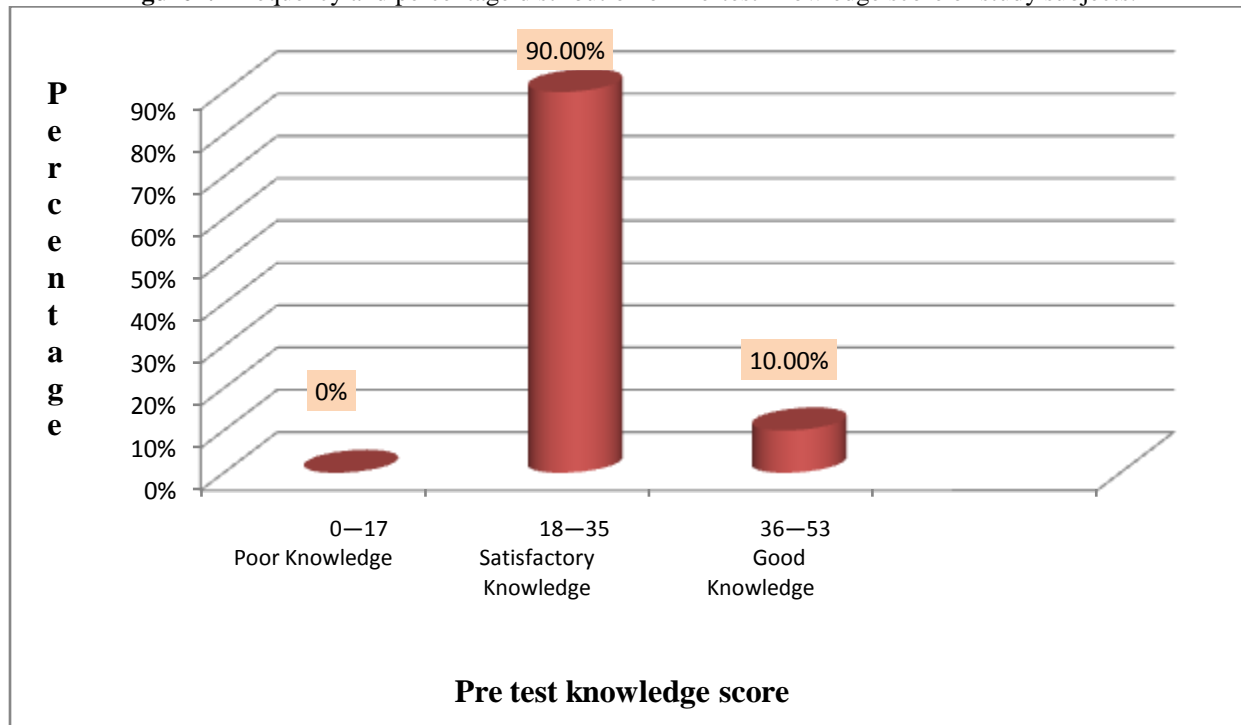
The results of the present study are presented in the following sections.

Section I: Description of demographic variables of study subjects

Out of 50 study subjects 11(22%) belonged to the age group of 18-28 years, whereas 8(16%) belonged to the age group of 29-39 years, 12(24%) belonged to age group of 40-50 years and 19(38%) belonged to the age group of >50 years. Hence majority of the study subjects i.e. 19(38%) were more than 50 years of age. Majority of the study subjects i.e. 26(52%) were females and 24(48%) were males. Majority of the study subjects i.e. (64%) were illiterate, 6(12%) were having primary education, 7(14%) have studied up to tenth, 1(2%) has passed twelfth class and 4(8%) were graduate. Majority of study subjects i.e. 37(74%) were from rural areas and 13(26%) were from urban areas. Majority of study subjects i.e. 20(40%) were ill from less than one year, 14(28%) were ill from 1-2 years and 16(32%) were ill from more than two years.

Section II: Description of pre-test knowledge score regarding management of common side effects of chemotherapy among cancer patients.

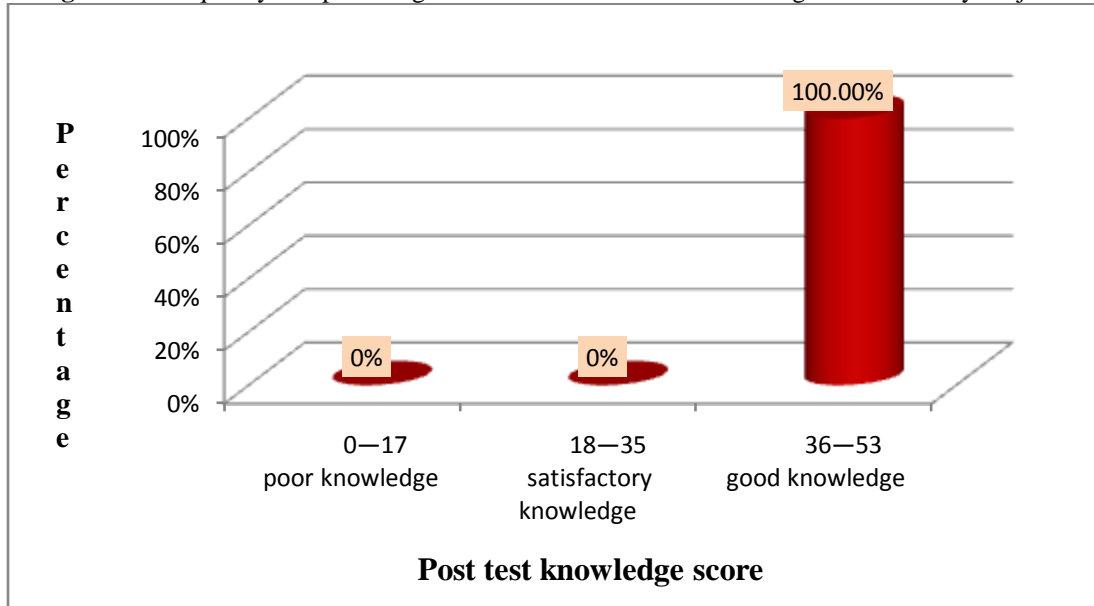
Figure1:- Frequency and percentage distribution of Pre-test knowledge score of study subjects.



Majority of study subjects 45(90%) had satisfactory knowledge, 5(10%) had good knowledge and none had poor knowledge regarding management of common side effects of chemotherapy. Hence majority i.e. 45(90%) of study subjects have satisfactory knowledge in pre-test.

Section III:Description of Post-test knowledge score regarding management of common side effects of chemotherapy among cancer patients.

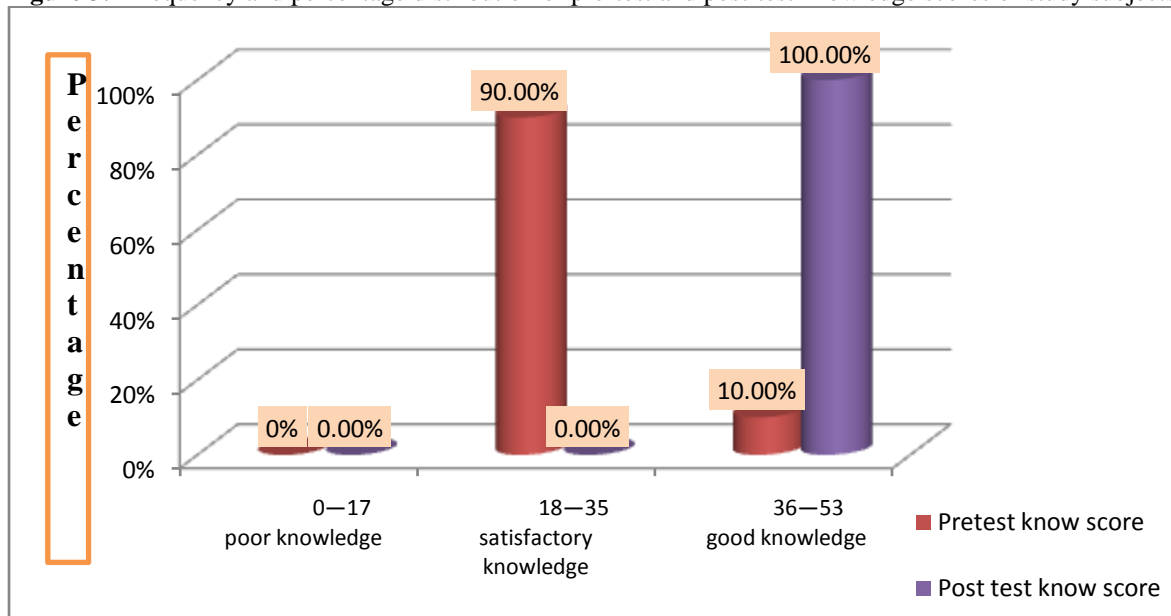
Figure 2:- Frequency and percentage distribution of Post-test knowledge score of study subjects.



Majority of study subjects 50(100%) have good knowledge score about management of side effects of chemotherapy (post-test).

Section IV: Comparison between pre-test and post-test knowledge scores of study subjects regarding management of common side effects of chemotherapy.

Figure 3:- Frequency and percentage distribution of pre-test and post-test knowledge scores of study subjects.



In the pre-test score of study subjects 90%had satisfactory knowledge, 10% had good knowledge, whereas in the post test score of study subjects 100% have good knowledge and none had satisfactory knowledge Thus it can be interpreted that all the study subjects have gained maximum knowledge i.e. 90% in aggregate which shows that the

structured teaching programme regarding management of common side effects of chemotherapy was highly significant.

Table 2:- Comparison of Mean, standard deviation, paired “t” test between pre-test and post-test knowledge scores of study subjects. (N=50).

knowledge scores	Mean±SD	Mean difference	t value	p value
Pre-test score	29.78 ±5.281	17.7	27.643	0.000*
Post test score	47.48±3.710			

SECTION V: Association of pre-test knowledge scores of subjects with the selected demographic variables (age, gender, educational status, residence, duration of illness).

Table 3:- Association of pre-test knowledge scores of subjects with the selected demographic variables n=50.

Variables	Categories	Good	Satisfactory	Poor	Chi Test	p value	Result
Age	18—28	2	9	0	4.966	0.174	NS
	29—39	2	6	0			
	40—50	1	11	0			
	>50	0	19	0			
Gender	Male	4	20	0	2.279	0.131	NS
	Female	1	25	0			
Educational status	Illiterate	1	31	0	18.66	0.000	S*
	Primary	0	6	0			
	10 TH	1	6	0			
	12 TH	1	0	0			
	Graduate and above	2	2	0			
Residence	Rural	5	32	0	1.952	0.162	NS
	Urban	0	13	0			
Duration of illness	<1 Year	2	18	0	0.535	0.765	NS
	1—2 Year	2	12	0			
	>2 Years	1	15	0			

S=significant and NS=not significant

There was significant association between pre-test knowledge score with educational status of study subjects (p=0.000), While as no association was found between pre-test knowledge score and other variables (age, gender, residence and duration of illness).

Discussion:-

Study showed the pre-test (Mean±SD) knowledge score was (29.78±5.281). In the pre-test, majority of the subjects 45(90%) had satisfactory knowledge, 5(10%) had good knowledge and 0(0%) of the study subjects had poor knowledge. The post-test knowledge scores revealed that all the 50 (100%) cancer patients have good knowledge, 0(0%) have satisfactory knowledge and 0(0%) have poor knowledge. The post-test (Mean±SD) knowledge score was (47.48±3.71). These findings revealed that the subjects had developed good knowledge in the post test regarding management of common side effects of chemotherapy. The post-test (Mean±SD) knowledge score of the study subjects was (47.48±3.710) which was significantly higher than the mean pre-test knowledge scores (29.78 ±5.281) of study subjects (p=0.001) at 0.05 level of significance. Findings of the present study indicates that there was statistically significant association between pre-test knowledge score with educational status (p=0.000) only. While as no association was found between the pre-test knowledge scores of the study subjects with other demographic variables like age (p=0.174), gender (p=0.131), residence (p=0.162) and duration of illness (p=0.675) at 0.05 level of significance. These findings are consistent with the findings of the study conducted by **Choenyi N, Kumari M, Choedon S, Kumari M, Kumari S, Indu K, et al³⁰** on assessment of knowledge regarding ill effects of Chemotherapy and its home management among Patients Receiving Chemotherapy.

Conclusion:-

The findings of the study concluded that in the pre-test patients were having satisfactory knowledge regarding management of common side effects of chemotherapy. The mean post-test knowledge score increased after administration of structured teaching programme indicating that structured teaching programme was effective in improving knowledge of patients regarding management of common side effects of chemotherapy. Therefore, awareness programs about management of common side-effects of chemotherapy should be conducted among cancer patients.

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