

A Study to Evaluate the Effectiveness of Planned Teaching Programmed on Knowledge Regarding Side Effects of Selected Chemotherapy and Its Management among Oral Cancer Patient in Selected Cancer Hospital, Gwalior, M.P.

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ABSTRACT

Background: Chemotherapy (chemo) is the use of anti-cancer drugs to treat cancer. For oral cavity and oropharyngeal cancers, the drugs are given into a vein or taken by mouth, which allows them to enter the bloodstream and reach cancer that has spread throughout the body. **Objectives:** The aim of this study was to assess the pre and post knowledge score of oral cancer client regarding side effects of selected chemotherapy and its management at hospital, Gwalior. **Methods:** The research approach adopted for this study is **Evaluative research approach**. Sampling subjects N= 40 were selected by convenient sampling. Pre-test knowledge questionnaires were given to the subject regarding the side effect and management of selected chemotherapy of oral cancer patient. Planned teaching programme regarding the side effect and management of selected chemotherapy of oral cancer patient. was implemented after pre-test. Post-test assessment was done after 7 days of the implementation of the planned teaching programme and assessed their knowledge on side effect and management of selected chemotherapy of oral cancer patient. **Results:** It is revealed from the above table that in pre-test mean score was (7.0± 1.30), where as in post-test mean score was (13.6±2.04). There was highly significant difference between the level of score in pre and post-test. Pre-test and post-test mean % was (77.80% + 71.50%) and Pre and post-test mean difference was 6.30%. Hence, the research hypothesis H₂ was accepted. **Conclusion:** The findings of the study shows that PTP was effective in terms of gaining knowledge regarding prevention of coronary artery disease. Therefore, the research hypothesis was accepted.

KEYWORDS: Oral cancer, Chemotherapy, Planned Teaching Programme, Oral Cancer Client, Side Effect

INTRODUCTION

The word cancer is derived from the Latin word “crab”, probably because of the way a cancer adheres to any part that it seizes upon in an obstinate manner like the crab. It is a popular, generic term because the actual medical term for cancer is “neoplasia” which, from the Greek, means new formation. Cancer cells are described as malignant neoplasm and are classified and named by tissue of origin. The failure of the immune system to promptly destroy abnormal cells permits these cells to grow too large to be

managed by normal immune mechanisms. Certain categories of agents or factors implicated in carcinogenesis (malignant transformation) include viruses, physical agents, chemical agents, genetic or familial factors, dietary factors, and hormonal agents.

The most common site for oral cancer in the older age group was the buccal mucosa (37%), Followed by tongue (21%) and gingiva (20%)². It is among the most common cancers seen in both Indian men and

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women as can be gauged from the records of the National Cancer Registry Programme.

Tobacco use is associated with about 75 percent of oral cancer cases, caused by irritation of the mucous membranes of the mouth from smoke and heat of cigarettes, cigars, and pipes. Tobacco contains over 60 known carcinogens, and the combustion of it, and by products from this process, is the primary mode of involvement. Use of chewing tobacco or snuff causes irritation from direct contact with the mucous membranes

Cancers in all forms are causing about 12% of deaths throughout the World. In the developed countries cancer is the second leading cause of death accounting for 21% (2.5million) of all mortality . There is a significant difference in the incidence of oral cancer in different regions of the world: 90% of the patients with the oral cavity and the oropharyngeal cancer use tobacco and the of developing these cancer increases with the amount smoked or chewed and duration of the habit.

Cancers are the most common cause of death in adults. Oral cancer (OC) is a broad term that includes various malignant diseases that are present in oral tissues, which are found on the lip, floor of the mouth, buccal mucosa, gingiva, palate, or in the tongue. The majority (84%–97%) of OCs are squamous cell carcinoma (SCC) which arise from pre-existing “potentially malignant” lesions or more often from normal appearing epithelium. The term “oral potentially malignant disorders” is recommended by the WHO in 2005. It includes both oral premalignant lesions and conditions. There are number of potentially malignant disorders which constitute a detectable preclinical phase of OC. The most important ones are oral submucous fibrosis, leukoplakia, erythroplakia, candida leukoplakia, lichen planus, dyskeratosis congenita. Around 300,000 patients are annually estimated to have OC worldwide. India has world's highest number (nearly 20%) of OCs with an estimated 1% of the population having oral premalignant lesions. Approximately 95% of OC occurs in people older than 40 years, with an average age at diagnosis of approximately 60 years.

Indian Council of Medical Research (2019) - India recorded an estimated 3.9 million cancer cases in 2016, data available with the National Cancer Registry Programme of the Indian Council of Medical Research (ICMR) shows. The worst affected states were Uttar Pradesh with 674,386 cases, followed by Maharashtra with 364,997 and Bihar with 359,228. In South India Tamil Nadu recorded 222,748 cases, Karnataka 202,156, Andhra Pradesh 159,696, Telangana 115,333 and Kerala 115,511 cases of

cancer. “More than 40% of the cancer cases in India are totally preventable such as lung cancer and cancers of mouth. The ICMR earlier this year said that India is likely to have over 17.3 lakh new cases of cancer and over 8.8 lakh deaths due to the disease by 2020 with cancers of breast, lung and cervix topping the list.

Need of the study:

Oral cancer is a heterogeneous group of cancers arising from different parts of the oral cavity, with different predisposing factors, prevalence, and treatment outcomes. It is the sixth most common cancer reported globally with an annual incidence of over 300,000 cases, of which 62% arise in developing countries. There is a significant difference in the incidence of oral cancer in different regions of the world. The age-adjusted rates of oral cancer vary from over 20 per 100,000 population in India, to 10 per 100,000 in the U.S., and less than 2 per 100,000 in the Middle East (1). In comparison with the U.S. population, where oral cavity cancer represents only about 3% of malignancies, it accounts for over 30% of all cancers in India. The variation in incidence and pattern of oral cancer is due to regional differences in the prevalence of risk factors. But as oral cancer has well-defined risk factors, these may be modified – giving real hope for primary prevention.

Varshitha . A (2019) Burden Of Oral Cancer In India, 20 per 100000 population are affected by oral cancer which accounts for about 30% of all types of cancer. Over 5 people in India die every hour everyday because of oral cancer and the same number of people die from cancer in oropharynx and hypo pharynx. CANCER registration is not compulsory in India, so the true incidence and mortality may be higher, as many cases are unrecorded and loses follow up . None of the national registry provides cancer incidence or mortality data for India.

Abhishek Shankar, Shubham Roy (2019) Oral Mucositis (OM) is among the most common and dreaded toxicities of cancer therapy. It occurs in almost all patients who receive radiation therapy in which areas of oral and oropharyngeal mucosa are included in the treatment field. With the advent of chemotherapy in 1940 and its extended clinical legacy, it is only within the past two decade or so that mucositis' complex pathobiology has become fully appreciated. There are still many unanswered questions about the risk factors for developing OM, but historically, risk factors have been attributed to both therapy and patient m characteristics. One thing that has been consistent from the initial descriptions of its clinical manifestations has been the frustration on the part of clinicians and patients with the scarcity

of therapeutic options to prevent or treat the condition, or effectively ameliorate the symptoms. Clinicians, researchers and those involved in oral and periodontal medicine should join hand in hand in pursuit of understanding and developing treatment strategies for treatment of inflammatory conditions like OM in oncology. This will lead to development of effective treatments and reducing the burden of OM and other inflammatory conditions in oncology.

PROBLEM STATEMENT:

“A study to Evaluate the Effectiveness of Planned Teaching Programme on knowledge regarding side effects of selected chemotherapy and its management among oral cancer patient in Selected Cancer Hospital, Gwalior, M.P.”

OBJECTIVES:

1. To assess the pre and post knowledge score of oral cancer client regarding side effects of selected chemotherapy and its management at hospital, Gwalior, M.P.
2. To Find out the significant difference between pre and post-tests knowledge score regarding side effects of selected chemotherapy and its management among oral cancer clients at hospital, Gwalior, M.P.
3. To find out the association between pre-test knowledge score of oral cancer client with their demographic variables.

HYPOTHESIS:

H₁-There is a significant difference between pre and posttest knowledge score on side effects of chemotherapy and its management among oral cancer clients.

H₂-There is a significant association between pretest knowledge score on side effects of chemotherapy and its management among oral cancer clients with selected demographic variables.

OPERATIONAL DEFINITIONS:

Evaluate : In this study, evaluate means statistical measurement of knowledge level of oral cancer patient regarding side effects of selected chemotherapy and its management through closed ended questionnaire

Effectiveness - Improvement of post test scores over pre test scores after planned teaching for cancer clients regarding the management of side effects of chemotherapy.

Planned Teaching Programme – The planned teaching is a series of information regarding management of side effects of selected chemotherapy prepared by the investigator for oral cancer patients like cisplatin .

Knowledge :- It refers to the correct response of patient regarding effect of chemotherapy and its management of cancer client..

Side effects- It refers to the side effect of chemotherapy during.

Selected Chemotherapy- It is the process by which chemical drugs (cisplatin) are given as the treatment regimen for oral cancer patients

Management - It refers to the steps taken to control the side effects of chemotherapy for oral cancer patients

Oral Cancer clients - It refers to the people who are affected by oral cancer disease and who are receiving chemotherapy at Selected Cancer Hospital Gwalior .

MATERIAL AND METHODS:

Research approach: Evaluate research approach was used.

Research design: *pre-experimental one group pre-test post-test design.*

Variables:

Independent variables: Planned teaching programme on side effects of selected chemotherapy and its management

Dependent variables: Knowledge of oral cancer patient side effects of selected chemotherapy and its management **Research setting:**

The study was conducted in Cancer Hospital Gwalior. (M.P)

Population: *In this study population consisted of Oral cancer patients.*

Target Population: oral cancer patients

Accessible population: Oral cancer patient at Cancer Hospital Gwalior.

Sample: Oral Cancer patients in Cancer Hospital

Sample size: 40 oral cancer patients

Sample techniques: non-probability convenient sampling technique

Criteria for sample selection:

Inclusion criteria:

1. Oral cancer patient who were undergoing chemotherapy
2. Admitted at Selected Cancer Hospital , Gwalior
3. Irrespective of illness

Exclusion criteria:

1. Patient who was having other type of cancer
2. Oral cancer patient who was undergoing radiation and other therapies
3. Who were underwent any awareness programme

Tool and method of data collection:

DEVELOPMENT OF TOOL

Tools were developed to assess the knowledge regarding cancer undergoing chemotherapy in selected hospital. These were developed after review of related literature and after taking opinions from experts.

DESCRIPTION OF THE TOOL SCORING SYSTEM

Arbitrary scoring on a five point scale was developed as follows

| Grade | Score |
|-----------|---------|
| Very good | 0 – 7 |
| Good | 8 - 15 |
| Poor | 16 - 20 |

The oral cancer patient in the selected group were provided a pre-test self-structured questionnaire followed by which planned teaching programme was presented on the same day. On 7th day the post-test was done with the help of same self-structured knowledge questionnaire.

Reliability of tool: In the present study the reliability was established by using and split half method. The reliability coefficient of structured knowledge questionnaire was $r = 0.82$ which indicates that the tool is reliable.

Data collection procedure:-

- Consideration ethics, written permission was obtained from the director, Jawaharlal Nehru Cancer Hospital, Gwalior to conduct the main study from 28/11/2022.
- written consent was obtained from the respondents and confidentially was assured to the subject.

RESULTS:

ANALYSIS OF ORAL CANCER PATIENTS WITH THE KNOWLEDGE SCORE OF SIDE EFFECTS OF SELECTED CHEMOTHERAPY AND ITS MANAGEMENT ACCORDING TO THEIR DEMOGRAPHIC CHARACTERISTICS.

Table 1 Frequency and percentage distribution of oral cancer patients based on their demographic characteristics.

N=40

| S.N | Socio Demographic variable | Frequency | Percentage(%) |
|-----|----------------------------|-----------|---------------|
| 1 | Age (in Year) | | |
| | a <20 | 2 | 5% |
| | b 21-30 | 14 | 35% |
| | c 31-40 | 14 | 35% |
| | d >40 | 10 | 25% |
| 2 | Education | | |
| | a No formal Edu. | 12 | 30% |
| | b Primary | 12 | 30% |
| | c Higher Sec. | 7 | 18% |
| | d Degree | 9 | 23% |

- A total of 40 cancer patient were selected as sample for the study who are undergoing chemotherapy in the Selected Cancer Hospital , Gwalior.
- The purpose of the study was explained to the subjects. The investigator collected for the final study from 40 cancer patient who fulfilled the inclusion criteria.
- The samples were selected using non probability convenient sampling technique.
- The time taken to complete the questionnaires was around 30 minutes. same day planned teaching programme was provided to the respondents.
- on the 7th day of planned teaching programme, post test was conducted with the same tool to assess level of knowledge regarding side effect of chemotherapy and its management.

Ethical consideration:

The researcher had taken prior written permission from the director, Jawaharlal Nehru Cancer Hospital, Gwalior.

Plan for data analysis:

The plan for data analysis includes-

- Demographic data was planned to analyze in terms of frequency and percentage.
- Paired “t” test to determine the effect of Planned Teaching Programme on side effect of chemotherapy and its management among oral cancer patient using pre-test and post-test Knowledge scores.
- Chi square test was used to find out the association of pre-intervention knowledge scores with their selected demographic variables.

| | | | | |
|---|---|------------------------------|----|-----|
| | | Occupation | | |
| 3 | a | Farmer | 9 | 23% |
| | b | Govt Employee | 8 | 20% |
| | c | Private worker | 11 | 28% |
| | d | Labor | 12 | 30% |
| | | Family Monthly Income | | |
| 4 | a | 2000-5000 | 1 | 3% |
| | b | 5001-10000 | 13 | 33% |
| | c | 10001-15000 | 15 | 38% |
| | d | >15000 | 11 | 28% |
| | | Type of Family | | |
| 5 | a | Nuclear | 10 | 25% |
| | b | Joint | 12 | 30% |
| | c | Extended | 13 | 33% |
| | d | Separated | 5 | 13% |
| | | Source of Information | | |
| 6 | a | Mass media | 14 | 35% |
| | b | Family members | 10 | 25% |
| | c | Health care Person | 10 | 25% |
| | d | Neighbor | 6 | 15% |
| | | Residential Area | | |
| 7 | a | Urban | 17 | 43% |
| | b | Rural | 23 | 58% |
| | | Food Habits | | |
| 8 | a | Non-vege | 16 | 40% |
| | b | Mixed | 24 | 60% |

Table No: 1 depicted that percentage wise distribution of patients with Oral cancer undergoing chemotherapy according to their age wise in which, Highest 70% were found in the age group of 21-40 years, followed by 25 % were in age group of above 40 years. Only 5% of them belongs to below 20 years. According to educational background in which, Highest 30% were found with no formal education and 30% were found with just primary education, followed by 23 % were Degree qualified and 18% were higher secondary. According to their family income in which, Highest 38% were having total family income between 10001 to 15000, followed by 33 % were having family income of 5001-10000. 28% of the total having family income of more than 15000 and 3% of the total were having family income just below to 50000. According to their Occupation in which, Highest 30% were found labour, followed by 28% were found private worker. 23% of the total were found farmer and only 20% were found government employee. According to their type of family in which, Highest 33% belongs to extended families, followed by 30% belongs to joint families. 25% of the total belongs to nuclear families and only 13% belongs to the separate families. According to source of information where patients used to get information in which, Highest 35% have got information from social media, followed by 25% have got information from family members and 25% have got information from health care persons. Only 15% of the total just got information from their neighbour. According to resident type in which, Highest 58% were from rural resident and 43% were from urban resident. According to food type in that, 40% of them were found vegetarian., where as 60% of them were mixed.

ANALYSIS OF THE PRE- TEST, THE KNOWLEDGE SCORE OF ORAL CANCER CLIENT REGARDING SIDE EFFECTS OF SELECTED CHEMOTHERAPY AND ITS MANAGEMENT

Table 2: Score categorization based on the marks obtained in pre/posttest Frequency and percentage distribution based on the pre-test score:

| Score | Frequency | Percentage | Mean | SD | Mean % |
|---------|-----------|------------|------|------|--------|
| Poor | 26 | 65% | 7.00 | 1.30 | 77.80% |
| Average | 14 | 35% | | | |
| Good | 0 | 0% | | | |

Table 2: depicted that frequency and percentage distribution of the pre- test of knowledge score on side effects of chemotherapy and its management among cancer clients. 65% of the patient performed poor whereas only

14% of them performed average. None of the patient performed good in pre-test. The pre-test mean score was (7.0 ± 1.30). The mean percentage score is 77.8%.

Table no 3: Frequency and percentage distribution based on the Post-test score:

| Score | Frequency | Percentage | Mean | SD | Mean % |
|---------|-----------|------------|-------|------|--------|
| Poor | 0 | 0% | 13.60 | 2.04 | 71.50% |
| Average | 28 | 70% | | | |
| Good | 12 | 30% | | | |

Table 3: frequency and percentage wise distribution of the post- test of knowledge score on side effects of chemotherapy and its management among cancer clients. 70% of the patients had average knowledge 12% of them had good knowledge. None of the patient had poor in post-test. The post-test mean score was (13.60 ± 2.04). The mean percentage score is 71.5%.

EFFECTIVENESS OF THE KNOWLEDGE OF SCORE ORAL CANCER REGARDING SIDE EFFECTS OF SELECTED CHEMOTHERAPY AND ITS MANAGEMENT.

Table- 4: Over all differences of pre- test and post- test mean score, mean parentage, standard deviation and ‘t’ value of pre- test and post- test.

| Test | Mean | Mean % | S.D. | Mean % Difference | t value |
|-----------|-------|--------|------|-------------------|---------|
| Pre-Test | 7.00 | 77.80 | 1.30 | 6.30 | 17.36 |
| Post-Test | 13.60 | 71.50 | 2.04 | | |

It is revealed from the above table that in pre-test mean score was (7.0 ± 1.30), whereas in post-test mean score was (13.6 ± 2.04). There was a highly significant difference between the level of score in pre and post-test. Pre-test and post-test mean % was (77.80% + 71.50%) and Pre and post-test mean difference was 6.30%. Hence, the research hypothesis H₁ was accepted.

ASSOCIATION OF DEMOGRAPHIC VARIABLES AND PRE -TEST KNOWLEDGE SCORE OF ORAL CANCER CLIENT REGARDING SIDE EFFECTS OF SELECTED CHEMOTHERAPY AND ITS MANAGEMENT.

| Association of Pre-test knowledge level score selected demographic variables | | | | | | | | | |
|--|---------------------------------|-----------|--------------------|---------|------|-------------------|-------------|------------|--------------|
| S.N. | Demographic variable 4 category | Frequency | Level of knowledge | | | Degree of freedom | Table Value | chi square | Significance |
| | | | Poor | Average | Good | | | | |
| 1 | Age (in Year) | | | | | 6 | 12.592 | 1.193 | NS |
| | a <20 | 2 | 2 | 0 | 0 | | | | |
| | b 21-30 | 14 | 9 | 5 | 0 | | | | |
| | c 31-40 | 14 | 9 | 5 | 0 | | | | |
| | d >40 | 10 | 6 | 4 | 0 | | | | |
| 2 | Education | | | | | 6 | 12.592 | 11.708 | NS |
| | a No formal Edu. | 12 | 11 | 1 | 0 | | | | |
| | b Primary | 12 | 9 | 3 | 0 | | | | |
| | c Higher Sec. | 7 | 4 | 3 | 0 | | | | |
| | d Degree | 9 | 2 | 7 | 0 | | | | |
| 3 | Occupation | | | | | 6 | 12.592 | 14.093 | S |
| | a Farmer | 9 | 9 | 0 | 0 | | | | |
| | b Govt Employee | 8 | 2 | 6 | 0 | | | | |
| | c Private worker | 11 | 5 | 6 | 0 | | | | |
| | d Labor | 12 | 10 | 2 | 0 | | | | |
| 4 | Family Monthly Income | | | | | 6 | 12.592 | 4.789 | NS |
| | a 2000-5000 | 1 | 1 | 0 | 0 | | | | |
| | b 5001-10000 | 13 | 11 | 2 | 0 | | | | |
| | c 10001-15000 | 15 | 9 | 6 | 0 | | | | |
| | d >15000 | 11 | 5 | 6 | 0 | | | | |

| | | | | | | | | | | |
|---|------------------------------|--------------------|----|----|---|---|--------|-------|----|---|
| 5 | Type of Family | | | | | 6 | 12.592 | 2.079 | NS | |
| | a | Nuclear | 10 | 7 | 3 | | | | | 0 |
| | b | Joint | 12 | 9 | 3 | | | | | 0 |
| | c | Extended | 13 | 8 | 5 | | | | | 0 |
| | d | Separated | 5 | 2 | 3 | 0 | | | | |
| 6 | Source of Information | | | | | 6 | 12.592 | 2.491 | NS | |
| | a | Mass media | 14 | 7 | 7 | | | | | 0 |
| | b | Family members | 10 | 7 | 3 | | | | | 0 |
| | c | Health care Person | 10 | 7 | 3 | | | | | 0 |
| | d | Neighbor | 6 | 5 | 1 | 0 | | | | |
| 7 | Residential Area | | | | | 2 | 5.991 | 1.89 | NS | |
| | a | Urban | 17 | 9 | 8 | | | | | 0 |
| | b | Rural | 23 | 17 | 6 | | | | | 0 |
| 8 | Food Habits | | | | | 2 | 9.488 | 1.57 | NS | |
| | a | Non-Veg | 16 | 11 | 5 | | | | | 0 |
| | b | mixed | 24 | 15 | 9 | | | | | 0 |

Table 5: Chi – square test calculated to find out the association between the pre-test knowledge score of oral cancer client regarding side effects of selected chemotherapy and its management and with their demographic variables reveals that no significant association between pre-test level of knowledge score of oral cancer client regarding side effects of selected chemotherapy and its management when compared to their age, education, family income, type of family, residential area and food habits, education except Occupation of the patients (the calculated value $\chi^2= 14.09$ and table value 12.59). Hence it can be interpreted that percentage score related to demographic variables where only by chance and not true difference and H_2 research hypothesis was accepted.

DISCUSSION:

FINDINGS RELATED TO COMPARISON OF PRE AND POST INTERVENTIONAL LEVEL OF KNOWLEDGE

It is revealed from the above table that in pre-test mean score was (7.0 ± 1.30) , where as in post-test mean score was (13.6 ± 2.04) . There was a highly significant difference between the level of score in pre and post-test. Pre-test and post-test mean % was $(77.80\% + 71.50\%)$ and Pre and post-test mean difference was 6.30%. Hence, the research hypothesis H_1 was accepted.

Mohammed HA, Elswawi KAB and Saber MM; (2012) conducted a quasi-experimental study on a sample of 60 elderly male and female patients with gastrointestinal cancer to examine the impact of proposed nursing rehabilitation program on self-management of selected side effects of chemotherapy. The patients were randomly divided into two groups (study and control group). The study results revealed that there was statistically significant difference between study and control group in relation to incidence of chemotherapy's adverse effects as nausea and vomiting, mucositis and diarrhea after the last chemotherapeutic cycles. Post-test knowledge scores related to chemotherapy, adverse effects and balanced diet and post-test mean self-management scores related to elimination, mucositis, nausea and vomiting, oral care practice was higher in the study

group than control group. Nursing rehabilitation program seemed to have impact on gastrointestinal elderly patient's outcomes.

Conclusion: The conclusion drawn from the study based on the assessment of the effectiveness of planned teaching program on knowledge regarding side effects of selected chemotherapy and its management among oral cancer patient at Selected Cancer Hospital, Gwalior, M.P. After detail analysis of the study findings and experience of the investigator, this study leads to the following conclusion.

Recommendations:

- Since the study was limited to only 40 sample size by Non probability purposive technique which restricts generalization.
- The study did not use control group. The investigator had no control over the events that took place between pre-intervention and post-intervention. The study was limited to only evaluate knowledge of the oral cancer patient.

Conflict of interest: No

Financial support: Self

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