

Assessing Nutritional Needs of Oncology Patients Undergoing Chemotherapy at Bhagwan Mahaveer Cancer Hospital & Research Centre, Jaipur: Development of an Educational Booklet

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Received: 26 May 2024/ Revised: 27 Jun 2024/ Accepted: 30 Aug 2024

ABSTRACT

Background: Cancer is the word used for a tumor that spreads & destroys the host and is one of the leading causes of morbidity and mortality in developed and developing countries. Good nutrition is important for good health.

Methods: Non-experimental descriptive research design was adopted for a study to assess knowledge on meeting nutritional needs among 100 oncology patients receiving chemotherapy at Bhagwan Mahaveer Cancer Hospital & Research Centre, Jaipur. Sample selection using a non-probability convenient sampling technique. Data were collected through a self-developed structured knowledge questionnaire.

Results: Our results revealed that the majority of cancer patients, 43%, were in the age group of 31-40 years, 39% had no formal education, 32% had secondary education, and 17% had primary education. 76% were males, 24% were female, and 87% of participants did not have a family history of cancer. 55.23% of patients reported that nurses did counselling. The majority (67%) of respondents reported that they had previous information on meeting nutritional needs through diet counselling, and 33% reported they didn't have any information about meeting nutritional needs. Most (45%) of cancer patients had poor knowledge, 26% had average knowledge, and 29% had good knowledge scoring.

Conclusion: We concluded that results show that most (45%) of oncology patients receiving chemotherapy had poor knowledge of meeting nutritional needs during chemotherapy. However, the researcher developed an information booklet, and he hopes that the booklet will surely enhance the oncology patient's knowledge of meeting nutritional needs during chemotherapy.

Key-words: Chemotherapy, Meeting Nutritional Needs, Oncology Patients, Hemotherapy

INTRODUCTION

Cancer is the second leading cause of death worldwide. As estimated by GLOBOCAN, there were approximately 14.1 million new cancer cases and 8.2 million cancer deaths in 2012.

In 2015, 8.8 million new cases were identified. Globally it was estimated that nearly one death in 6 deaths is due to cancer. Worldwide, more than 12 million individuals are newly diagnosed with cancer annually. According to ICMR, 885 mortalities occurred due to cancer, and 38,375 incidences of cancer cases were recorded in Odisha in 2014.

Chemotherapy is a standard modality of cancer treatment that uses chemical agents to kill cancer cells in the cell cycles or use chemicals or drugs to inhibit cancerous cells' growth and metastasis. Chemotherapy has merits and demerits as the treatment affects both physiological and psychological aspects of human life i.e.

How to cite this article

Verma MK, Yadav KC, Goyal AK, Agarwal A. Assessing Nutritional Needs of Oncology Patients Undergoing Chemotherapy at Bhagwan Mahaveer Cancer Hospital & Research Centre, Jaipur: Development of an Educational Booklet. SSR Inst Int J Life Sci, 2024; 10(5): 6298-6303.



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pain, sleep disturbances, nausea, vomiting, stress, anxiety, gastrointestinal disorders etc^[1].

Good nutrition is important for good health. Eating the right immune diet before, during, and after cancer treatment can help the patient feel better and stronger. A healthy diet includes eating and drinking enough of the foods and liquids that have the important nutrients (vitamins, minerals, protein, carbohydrates, fat, and water) the body needs. When the body does not get or cannot absorb the nutrients needed for health, it causes malnutrition or malnourishment^[2].

Chemotherapy is one of the treatment modalities of cancer treatment, and mainly it weakens the immune system of the patient receiving chemotherapy. Antineoplastic drugs rapidly act on rapidly proliferated cells in blood, bone marrow, mouth, intestinal tract, nose, nails, vagina, and hair. Antineoplastic drugs not only affect cancer cells but also affect healthy cells. Hence, good nutrition is equally important as chemotherapy during treatment. Good nutrition affects tumour treatment, which can prompt better consequences for cancer treatment^[3].

Cancer treatment may affect patients' dietary patterns, and dietary changes can worsen other treatment-related symptoms^[4]. For example, cancer patients who experience Anorexia, alterations in taste and smell, mucositis, dysphagia, stomatitis, nausea, vomiting, diarrhoea, constipation and malabsorption due to cancer itself or adverse effects of treatment are higher levels of weight loss, lower energy intake, & quality of life is worse. Most patients undergoing cancer treatment report an altered sense of taste and smell. Cancer patients also reported early satiety and food aversions due to treatment^[5]. Dietary interventions, such as dietary counseling, flavor enhancement, oral supplementation, or tube feeding, have been found to lessen weight loss and improve health status. Nutrition plays a vital role in diminishing morbidity & mortality in patients undergoing chemotherapy^[6]. The study aims were to Assess Knowledge on Meeting Nutritional Needs among Oncology Patients Receiving Chemotherapy at Bhagwan Mahaveer Cancer Hospital & Research Centre, Jaipur, in a View to Develop an information booklet he hopes that booklet will sure enhance the oncology patient's knowledge of meeting nutritional needs during chemotherapy^[7-10].

MATERIALS AND METHODS

Research design- The study used a non-experimental descriptive research design to evaluate the understanding of oncology patients. It emphasized the chemotherapy's nutritional requirements. The sample comprised 100 patients from Bhagwan Mahaveer Cancer Hospital & Research Centre, Jaipur. In addition, this study was selected through a non-probability convenient sampling method. On the other hand, the data was assembled by employing a self-developed organized knowledge questionnaire validated by professionals in the field. Data were collected through demographic tools and structured knowledge questionnaires regarding meeting the nutritional needs of cancer patients. A demographic and structured knowledge questionnaire was prepared and sent to eight experts to establish validation. The demographic tool consisted of 11 questions and structured knowledge established by testing the internal consistency using the split-half method.

Inclusion criteria- The study included adult oncology patients receiving chemotherapy at Bhagwan Mahaveer Cancer Hospital & Research Centre. Participants were those who could comprehend and respond to the questionnaire, thus able to provide relevant information on their understanding of nutritional needs during chemotherapy.

Exclusion criteria- Patients excluded from the study were those who had cognitive impairments or conditions that hindered their ability to complete the questionnaire independently. Additionally, participants who declined to give informed consent or did not receive chemotherapy treatment during the study period were excluded.

Statistical Analysis- Data collected was analyzed using statistical software SPSS, version 20. Descriptive statistics summarized the demographic information and knowledge levels, and inferential statistics, including chi-square tests, assessed the association between demographic variables and participants' knowledge scores regarding nutritional needs. The reliability coefficient of the whole test was then estimated by Spearman-Brown Prophecy's formulae & coefficient was estimated by Cronbach's alpha by SPSS version 20 and obtained 0.77. The tool was found reliable ($r=0.77$).

Written permission was obtained from the Executive Director of BMCHRC before conducting studies. The pilot study was conducted among 10 patients at BMCHRC, Jaipur, and was found feasible.

Ethical Approval- Ethical approval for this study was obtained from the Executive Director of Bhagwan Mahaveer Cancer Hospital & Research Centre, Jaipur, on behalf of the tumour board (Research Ethics Committee). Written informed consent was obtained from each

participant before data collection commenced to ensure voluntary and ethical participation. Final study between 22/3/2019 to 23/4/2019 in BMCHRC Jaipur. Written permission was obtained from the Director of BMCHRC Jaipur. After receiving the consent form, the investigator met with the subject and established the report on the subject. Written informed consent was obtained separately from each patient.

RESULTS

Our results revealed that the majority of cancer patients 43% were in the age group of 31-40 years, The 76% were males and, 24% were female, the majority (67%) of respondents reported that they had previously information on meeting nutritional needs through diet counseling and 33% reported they don't have any information about meeting nutritional needs, 39% cancer patients had no formal education, 32% with

secondary education and 17% with primary education. 76% were males and 24% were female, and 87% of participants had no family history of cancer. 55.23% of patients reported that nurses did counseling. The majority (67%) of respondents reported that they had previous information on meeting nutritional needs through diet counseling and 33% reported they don't have any information about meeting nutritional needs (Table 1).

Table 1: Association between demographical variable and Nutritional needs of Cancer patients in selected Hospital at Jaipur

Sample	Freq.	Poor	Average	Good	Ch- sq	DF	t-value	N=100
Gender								
Male	76	32	17	27	6.84	2	5.99	p<0.05
Female	24	13	9	2				
Age (in Year)								
30-40 Years	43	22	14	7	13.77	6	12.59	p<0.05
41-50 Years	17	6	7	4				
51-60 Years	28	10	4	14				
Above 60 Years	12	7	1	4				
Educational /Qualification								
No Formal Education	39	20	14	5	23.62	6	12.59	p<0.05
Primary	17	6	7	4				
Secondary	32	10	4	18				
Graduate/Post-Graduate	12	9	1	2				
Monthly income of the Family								
Below Rs.20,000	37	19	9	9	13.42	6	12.59	p<0.05
Rs. 20,000-30,000	10	4	5	1				
Rs. 30,000 – 40,000	38	20	8	10				
Above Rs. 40,000	15	2	4	9				
Religion								
Hindu	76	32	20	24	4.43	6	12.59	p<0.05
Christian	2	1	1	0				
Muslim	18	10	5	3				
Sikh / Other	4	2	0	2				

Marital Status								
Married	40	19	15	6	25.54	6	12.59	p<0.05
Unmarried	17	7	6	4				
Divorce /Separated	31	9	4	18				
Widow	12	10	1	1				
Occupational Status								
Daily wages	43	21	15	7	21.65	6	12.59	p<0.05
Business	12	3	5	4				
Public/ Private Job	31	11	3	17				
House Job	14	10	3	1				

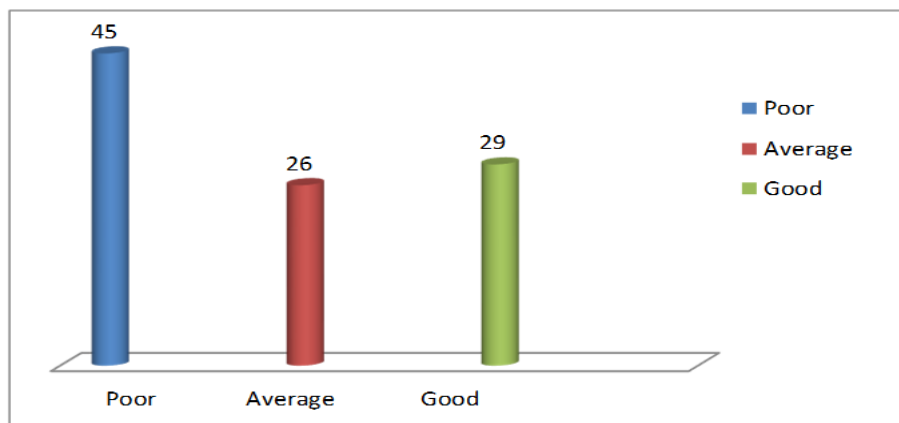


Fig. 1: Knowledge Regarding Meeting Nutritional Needs of Cancer Patients

DISCUSSION

The present study findings show that most (45%) of cancer patients had poor knowledge, 26% had average knowledge, and 29% had good knowledge scoring. This result shows that most (45%) of oncology patients receiving chemotherapy had poor knowledge of meeting nutritional needs during chemotherapy.

A similar study supported the findings of the present studies that around 60% of participants were unsatisfied with their level of knowledge, and 95% and 86.6% of participants had positive attitudes and poor practices, respectively. It was concluded that about two-thirds of the patients were unsatisfied with the information. It was recommended to give advice & guidelines for patients to minimize malnutrition complications & improve clinical outcomes for the patient's undergoing chemotherapy in the hospitals [11-14].

One similar study supported the present studies' findings that an observational, cross-sectional study was undertaken to identify malnutrition, available nutrition resources and patient information regarding nutrition needs [15-17]. Results show that 49% of patients were malnourished. External sources of nutrition information

were accessed by 37%, with popular choices being media/Internet (n=19) and family/friends (n=13). In a subsample (n=65), 32 patients were aware of the available nutrition resources, 23 thought the information sufficient, and 19 patients had read them. Malnutrition is common in oncology patients receiving treatment at an Australian public hospital, and almost half require improved symptom management and/or nutrition intervention [18].

The study finding shows that the chi-square value of the level of knowledge on meeting nutritional needs during chemotherapy of cancer patients and their age, family history, and health information regarding cancer commonly taken shows a statistically significant association between the level of knowledge and demographic characteristics. Educational status, occupation monthly family income, etc, show that statistically, there is no significant association between the level of knowledge and demographic characteristics [19].

Similar studies supported the present studies' findings on patient knowledge and demographic characteristics. The results of the current study show that there was a



highly statistically significant relation ($p \leq 0.01$) between demographic characteristics at gender, age and patient knowledge and statistically significant ($p \leq 0.05$) between demographic characteristics at the occupation and knowledge score^[20].

CONCLUSIONS

We concluded that results show that most (45%) of oncology patients receiving chemotherapy had poor knowledge of meeting nutritional needs during chemotherapy. The researcher developed an information booklet and hopes that the booklet will surely enhance the oncology patients' knowledge of meeting nutritional needs during chemotherapy. The study's findings will also open the eyes of oncologists and hospital administration to arrange counseling sessions for oncology patients on meeting nutritional needs during chemotherapy. The hospital administration should arrange in-service education programmes for nurses, such as workshops, conferences, seminars for healthcare professionals, and exhibitions on the nutritional needs of patients receiving chemotherapy. So, nurses and other care providers can provide more information regarding meeting the nutritional needs of oncology patients.

CONTRIBUTION OF AUTHORS

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