Knowledge of Patients Undergoing Chemotherapy toward Self Care in Kirkuk Center for Oncology and Hematology

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ABSTRACT

Background: Cancer is a dangerous disease that may kill people. The vast majority of cancer patients get chemotherapy treatment. Several negative side effects of chemotherapy affect patients' physical, mental, and social well-being, which in turn affects their capacity to take care of themselves.

Objectives: The main aim of the study is to determine the effectiveness of an instructional program on the knowledge of patients undergoing chemotherapy toward self-care.

Methodology The current study used a one-group design and a quantitative pre-experimental methodology. First, baseline data was collected before the research sample was exposed to the educational program; second, data was collected immediately after the program was implemented for the research sample; and third, data was collected after the program had been implemented. From October 3, 2023, until May 5, 2024, researchers at the Kirkuk Center for Oncology and Hematology carried out the study. Patients' socio-demographic data (Part I), patients' clinical data (Part II), and patients' knowledge of self-care strategies (Part III) make up the research instrument. The research instrument's reliability was assessed using the internal consistency approach, and its validity was established by a panel of experts.

Results: The study found statistically significant differences in three main areas of patients' self-care knowledge between the before and post-tests in the study group, with a p-value less than 0.05.

Conclusion: According to the results of the research, chemotherapy patients' understanding was low before they started the program. Nonetheless, the educational program shown a remarkable ability to enhance patients' understanding of self-care practices throughout chemotherapy.

KEYWORDS: Knowledge, Chemotherapy, patients, Self-Care, Oncology.

INTRODUCTION

Cancer is an intricate ailment that impacts the body's cells, which are the fundamental components of the body. Cancer is not a singular ailment with a solitary source, but rather a collection of multiple ailments that have diverse origins, presentations, treatments, and results. Building structures. The body undergoes constant cell proliferation as a mechanism for growth and expansion. Facilitate the restoration of damaged tissue and treat injuries. Cells undergo mitosis and experience apoptosis in a regulated manner. At times, cells that are incapable of undergoing regular division experience apoptosis. This may result in the occurrence of a deviation in the blood or lymphatic fluid of the body, or the creation of a larger growth known as a tumor (1). Chemotherapy is a treatment method that employs chemical chemicals to eliminate cancer cells. The phrase "systemic treatment" is used to describe the administration of medicine into the bloodstream, allowing it to circulate throughout the whole body and efficiently eradicate cancer cells in several locations. The primary purpose of these medications is to have a systemic impact, with the goal of eradicating cancer cells irrespective of their location inside the body. Chemotherapy is a treatment method that aims to specifically target cells that are dividing quickly by using chemically modified substances. Once the cancer cells are reached, they hinder their growth and reproduction until they are

completely eliminated. The adverse consequences of chemotherapy are contingent upon the specific medication, dose, frequency, and length of the treatment (2). The idea that chemotherapy drugs may selectively kill cancer cells was first advanced. The fact that these drugs also harm normal cells, leading to dose-dependent side effects, is, however, now well recognized. Nausea, alopecia, lethargy, constipation, fever, diarrhea, dysuria, infection, dermatitis, gingival bleeding, odontalgia, cough, jaundice, edema, vertigo, and in extreme cases, death, are all possible adverse effects of this medication. Medications used in chemotherapy often kill tumor cells by creating reactive oxygen species, a process known as genotoxicity. Both cancerous and non-cancerous cells are equally damaged by this process. (3).

The term "self-care" describes the intentional choices and activities that individual does to deal with a health issue or speed up the healing process. In order to cope with the mental and physical challenges posed by chemotherapy, patients may need to make adjustments to their usual routines for self-care. (4). Being able to control and oversee one's own care is a crucial capacity for the healing process. When patients are able to lead meaningful lives, they may have a sense of value and belonging in society. Patients' quality of life has been greatly enhanced as a result of the benefits of patient education on chemotherapy's side effects and symptom management. Cancer patients undergoing chemotherapy must be well-informed about their medications and actively participate in self-care to minimize the risk of adverse effects. Patients with cancer should be informed about the wide variety of side effects they can encounter and given detailed advice on how to manage them so that self-care measures work. Patients undergoing chemotherapy for cancer must have an in-depth familiarity with their medications and important self-care practices in order to avoid serious side effects. (5).

Methodology

The current study used a quantitative pre-experimental methodology, specifically using a one-group design. Two sets of data were collected: (1) pre-test baseline data, obtained before to the exposure of the study sample to the educational program, and (2) post-test data, acquired immediately following the implementation of the educational program for the research sample. The study was carried out at the Kirkuk Center for Oncology and Hematology between October 3,

2023, and May 5,2024. The study at Kirkuk Oncology and Hematology Center focused on patients who were receiving chemotherapy treatment for cancer. Study Sample A purposive sample of 30 patients receiving chemotherapy at Kirkuk Oncology and Hematology Center was selected, using a non-probability sampling method. The total number of patients in the oncology unit at Kirkuk Oncology and Hematology Center, as well as those receiving chemotherapy throughout the research period, was 81. The program had a total of 11 patients who declined to enroll, 7 patients who did not successfully finish the program, 8 patients who received treatment elsewhere, and 5 patients who were unable to participate. A total of 50 patients were included in the trial, all of whom satisfied the study requirements. Ten participants were eliminated from the trial as part of a pilot study. Additionally, the study omitted ten patients who had participated in the needs assessment. The final tally is 30. The research instrument has three primary components: The study instrument is divided into three parts. Part one gathers demographic and socioeconomic information from patients. Part two focuses on their medical history. Finally, part three assesses patients' knowledge through a questionnaire consisting of twenty-one multiple-choice items. These items are categorized into three primary dimensions that measure patients' awareness of self-care. Each question consisted of three items presented in an alternate form of multiple choice. The right answer was awarded a score of 1, while an erroneous response received a score of 0. A time frame of around 20 to 25 minutes is allocated for the completion of the exam. The educational program consists of three sessions and takes place over a duration of four weeks in the oncology department. Each session lasted between 45 and 50 minutes. The validity of the study instrument was determined by a panel of seven specialists, while its reliability was evaluated using the Cronbach's Alpha approach. The data analysis included the use of descriptive statistics and statistical inference to discern the discrepancies within the research group. The data were analyzed using the SPSS software, especially version 23.0. Descriptive data analysis entails the computation of the Mean of score (M.S), as well as the Standard Deviation (S.D) and frequency (f). Inferential data analysis involves several statistical tests, including the Binomial test, McNamara test, Wilcoxon signed rank test, and Analysis of Covariance (ANCOVA).

RESULTS

Table (1): Distribution of the studied (SD Cv.) with comparisons significant (N=30)

SDCv.	Classes	No	%
Age Groups Yrs.	20 _ 29	4	13.3
	30 _ 39	6	20.0
	40 _ 49	9	30.0
	50 _ 59	6	20.0
	60 _ 69	5	16.7

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	Mean ± SD	42.00 ± 12.91	
Gender	Male	17	56.7
	Female	13	43.3
Education level	Illiterate	4	13.33
	Can Read & Write	7	23.33
	Primary School Graduate	7	23.33
	Secondary School Graduate	3	10.0
	High School Graduate	3	10.0
	Institute Graduate	4	13.33
	Bachelor's degree and above	2	6.66
Marital status	Married	20	66.7
	Single	6	20.0
	Widowed	2	6.7
	Divorced	1	3.3
	Separated	1	3.3
Occupation Status	Employee	6	20.0
	Unemployed	9	30.0
	Retired	2	6.7
	House wife	12	40.0
	Student	1	3.3
Residency	Rural	16	53.3
	Urban	14	46.7
Monthly Income	Sufficient	6	20.0
	Barely Sufficient	11	36.7
	Insufficient	13	43.3

The socio-demographic data is shown in this table, showing that the average age of the research participants is (42.00 ± 12.91). Nine people, or 30.0% of the total, fall within the age bracket of 40 to 49. If we look at the numbers by gender, we can see that men make up around 56.7 percent of the sample. Seven people, or 23.33% of the total, are literate and enrolled in primary school, making up over 25% of the research sample. There are a lot of married people in the research group (n=20; 66.7). The results show that housewives made up a significant portion of the study group, accounting for forty percent of the total (n = 12). With a total of sixteen people (or 53.3% of the total), most of the people who took part in the research are from rural areas. A greater number of people in the research group (n = 13; 43.3% of the total) said that their monthly income was insufficient. Based on the data in the table, it can be concluded that the variables in question do not have any statistically significant relationships (p>0.05).

Table (2): Distribution of the studied (SDCv.) with comparisons significant (N=30)

SRv.	Classes	No	%
When had you been Diagnosed	From a month to less 6 months	11	36.7
	From 6 months to less 1 year	14	46.7
	From 1 year and more	5	16.7
Past Family History of Cancer	Similar type of cancer	6	20.0
	Other type of cancer	7	23.3
	No history of cancer	17	56.7
Primary Cancer Site	Breast cancer	10	33.3
	Bladder	4	13.3
	Prostate	3	10.0
	Leukemia	3	10.0
	Pancreas	3	10.0
	Ovary	3	10.0

	Lung	4	13.3
Type of treatment given to him after diagnosis of the disease	Chemotherapy	19	63.3
	Surgery	2	6.7
	Chemotherapy and Surgery	9	30.0
Suffer from other Chronic Diseases	Yes	16	53.3
	No	14	46.7
Source of Information "Information about chemotherapy and Self-Care"	Non-Applicable	22	73.3
	Family and friends	1	3.3
	Books and magazines	1	3.3
	Cancer patients themselves	1	3.3
	Mass Media	2	6.7
	Information Network	1	3.3
	A Health Care Provider	2	6.7

The presented table displays the clinical data of the study, indicating that a larger percentage of participants in the study group were diagnosed within the timeframe of 6 months to less than 1 year (n = 14; 46.7%). On the other hand, a smaller proportion of participants were diagnosed within a month to less than 6 months (n = 11; 36.7%). Most individuals in the study group (n = 17; 56.7) stated that there was no family history of cancer. The findings show a significant proportion of individuals in the study group who were diagnosed with breast cancer (n = 10; 33. 3%).In addition, a majority of individuals within the study group indicated that they had chemotherapy following to their cancer diagnosis (n = 19; 63. 3%).Among the study group, the greatest proportion of individuals (n = 16; 53.3%) reported suffering from chronic illness. The majority of participants in the study group (n = 22; 73.3%) indicated a lack of prior knowledge about chemotherapy and self-care. The study group participants who indicated that they have prior knowledge of chemotherapy and self-care said that the primary sources of this information were the mass media and a medical professional (n = 2; 6. 7%). The findings indicate that there is no statistically significant correlation between the specified variables, since the p-value is greater than 0.05.

Table (3): Descriptive Statistics for studied sampled according to "Patients knowledge toward self-care of chemotherapy side effects" items along Pre to Post Periods with comparisons significant (N=30)

Patients' knowledge toward Self-Care of Chemotherapy Side Effects	Responses	Pre					Post					C.S. (*)
		No.	%	MS	SD	RS%	No.	%	MS	SD	RS%	P-value
To reduce the symptoms of anemia must get enough sleep by:	False	15	50	0.500	0.51	50.0 M	8	26.7	0.733	0.45	73.3 H	P=0.039 (S)
	Correct	15	50				22	73.3				
To avoid infection of the patient:	False	21	70	0.300	0.47	30.0 L	20	66.7	0.333	0.48	33.3 M	P=1.000 (NS)
	Correct	9	30				10	33.3				
To avoid constipation on the patient:	False	25	83.3	0.167	0.38	16.7 L	21	70	0.300	0.47	30.0 L	P=0.219 (NS)
	Correct	5	16.7				9	30				
To avoid diarrhea on the patient:	False	17	56.7	0.433	0.50	43.3 M	11	36.7	0.633	0.49	63.3 M	P=0.109 (NS)
	Correct	13	43.3				19	63.3				
To avoid anorexia of the patient:	False	26	86.7	0.133	0.35	13.3 L	22	73.3	0.267	0.45	26.7 L	P=0.125 (NS)
	Correct	4	13.3				8	26.7				
To avoid causing mouth and gum injuries ,to the patient:	False	28	93.3	0.067	0.25	6.7 L	22	73.3	0.267	0.45	26.7 L	P=0.070 (NS)
	Correct	2	6.7				8	26.7				
When the drought occurs Redness skin rash ,on the patient:	False	21	70	0.300	0.47	30.0 L	6	20	0.800	0.41	80.0 H	P=0.000 (HS)
	Correct	9	30				24	80				

(*) HS: Highly Sig. at P<0.01; NS: Non-Sig. at P>0.05; Testing based on McNemar test. Assessment Grades by RS%: [L: Low (0.00 _ 33.33); M: Moderate (33.34 _ 66.66); H: High (66.67 _ 100)].

Results shows in this table that responding before applying instructional program are accounted mostly at a low level, and assigned 5(71.43%) items, while leftover items 2(40.0%) have a moderate assessed level. As for results after implementing the program, although there were three items remained with a low assessed, but a positive change has been occurred, since its relative sufficiency are bordered to a moderate assess, in addition to positive change in the remaining items. In addition to that, results of testing significant in reference of studied items are reported no significant differences at P>0.05

DISCUSSION

in Table (1) In terms of age, the statistics show that the majority (30.0%) fall within the 40-49 age range in the survey's results, with an average age of 42.00 ± 12.91. The results of this study are backed by (6) Researchers in Yogyakarta, Indonesia, looked at how well a program for self-care symptom management helped cancer patients and their loved ones cope with chemotherapy side effects. Researchers observed that people aged 40–65 made up the bulk of the sample (82.5%). Many factors, including the escalating hormonal changes associated with aging, contribute to the increased cancer risk shown in the study's sample of individuals in the aforementioned age range.

Regarding gender, the data analysis completed in this study revealed that 56.6% of the participants were male. While, disagrees with(7) Researchers at Alexandria Main University Hospital's Oncology Therapy Unit discovered that women made up 76.0% of the sample. It is possible that the disparity in interpretation is due to the fact that men smoked more than women, according to the statistics. Of those who took part in the study, 23.33 percent possessed literacy skills at the elementary school level or above. The majority of cancer patients who received chemotherapy had finished elementary education, according to these statistics. Patient education may help with early cancer identification, risk factor mitigation, and consequence severity by increasing patients' understanding of the disease and treatment alternatives. This explains why those with less education tend to have a higher cancer rate. Less educated patients are more likely to be stressed out since they don't know what's wrong with them, but more educated patients are more likely to be aware of their illness and its symptoms.(8) Chemotherapy patients' self-care habits were the focus of a study out of Chonburi City's National Regional Cancer Center. According to the results, 31.3% of the patients had finished elementary school. In terms of marital status, 66.7% of the total persons who took part in the questionnaire are married. According to the most recent studies, there is no significant difference in cancer risk between married and unmarried people. There is some evidence that breastfeeding lowers cancer risk, especially when a woman continues to breastfeed for more than a year. In addition, getting spousal input is a big deal that might raise self-care awareness.(9, 10) More than 70% of the people who took part in the studies were married, according to the researchers. Most of the patients in the study were either unemployed or classed as housewives, making up 30.0% and 40.0% of the sample, respectively, in terms of employment. The fact that many of the sample members are elderly people whose health prevents them from working might be a contributing factor. When people work together in a group, they learn more about illness and its treatment via hearing the stories of others.(7) Based on their investigation with 50 participants, it was found that most of them were jobless. In terms of where they call home, 53.3% of the whole sample lives in rural areas, according to the study. An elevated risk of cancer is caused in large part by environmental factors. Industrial pollutants, explosions, and other chemical factors that affect the air, together with the remnants of war, have contributed to a dramatic rise in environmental pollution in Iraq. This is one of the main reasons why people in urban areas are more likely to get cancer.(2) Of the total number of cancer patients in Uttarakhand, 35 (or 58% of the total) lived in rural regions, while 25 (or 42% of the total) were urbanites. The bulk of research participants (43.3%) reported having insufficient monthly income. Patients' knowledge of self-care may be impacted by their monthly income. It is believed that financial limitations within families contribute to poverty, which in turn increases the chance of cancer development and delays early detection.(11) their findings Their research highlighted the fact that cancer is becoming more common in low- and middle-income countries, which increases the worldwide risks of cancer and cancer deaths.

in Table (2) Regarding to when had you been diagnosed, in this study, the data revealed that approximately half of participants were diagnosed during a timeframe ranging from 6 months to less than 1 year (46.7%). A smaller percentage of participants were diagnosed within a timeframe ranging from 1 month to less than 6 months (36. 7%). The mortality and health difficulties for cancer patients are closely correlated with the stage at which the disease is diagnosed. The patients who are diagnosed early have fewer problems and much greater percentages of survival. Access to healthcare, particularly primary care facilities and screening programs, is crucial for the timely identification of cancer.(6), (77.5%) of the sample had received a diagnosis in less than one year. Regarding the previous familial cancer history, most of the participants in the research (56.7%) said that they did not have any family history of cancer. An individual who has had a family member who had cancer in the past may provide helpful information into the condition as well as methods for managing the adverse effects of therapy.(12) Family health history is a very influential factor in determining the chance of developing cancer. Patients who have three or more first degree relatives with breast or prostate cancers have a risk that is four times higher and eleven times higher for those illnesses, respectively. By obtaining a comprehensive family health history, medical professionals may promptly identify

these individuals and implement tailored preventive measures, including as intensified screening, prophylactic surgery, risk-reducing medications, and lifestyle modifications, at earlier and more manageable stages. In terms of the main site of cancer, the majority of samples in the research were diagnosed with breast cancer, accounting for (33.3%) of the study findings.(6) The research performed at a public hospital in Yogyakarta, Indonesia, revealed that (60%) of participants in the self-care symptom management program, aimed at improving the quality of life for cancer patients receiving chemotherapy and their family caregivers, had breast cancer. Regarding the treatment received after being diagnosed with the condition, the majority of patients (63.3%) were administered chemotherapy, as shown by the research findings.(7) A study was conducted with a sample size of 50 individuals to investigate the self-care practices of patients undergoing chemotherapy. The examination was carried out at the Oncology Therapy Unit of the Alexandria Main University Hospital. The chemotherapy ward has 12 beds, with 78% of patients undergoing surgery and all patients receiving chemotherapy. Regarding the prevalence of chronic diseases, a study found that 53.3% of patients were affected by such illnesses. This high proportion can be attributed to the fact that the sample consisted mainly of adults over the age of 50, who are more likely to have chronic diseases. It is worth noting that chronic diseases like diabetes, hypertension, and others can also worsen the adverse effects of chemotherapy. Regarding the data on chemotherapy and self-care, a majority of the participants in the research study (73.3%) indicated a lack of prior knowledge on the subject. The insufficient knowledge of chemotherapy and self-care can be related to the lack of education of the participants and the absence of awareness efforts and educational programs throughout the cancer treatment phase.(2) concerning prior knowledge of chemotherapy and the administration of the treatment at home 50% of the patients had prior information of chemotherapy and how to handle it at home, whereas 50% had no such experience.

in Table (3) Results shows that responding before applying instructional program are accounted mostly at a low level, and assigned 5(71.43%) items, while leftover items 2(40.0%) has a moderate assessed level. As for results after implementing the program, although there were three items remained with a low assessed, but a positive change has been occurred, since its relative sufficiency are bordered to a moderate assess, in addition to positive change in the remaining items. Many studies have shown that enhancing self-care habits through education considerably reduces the severity of side effects (13).

The results indicate that there is a lack of strong correlations between the overall evaluations of patient progress before and after implementing the suggested program. Furthermore, no statistically significant associations were seen with a p-value greater than 0.05. (2)The study found that the factors of location of residence and prior knowledge of chemotherapy were not significantly associated with awareness of the adverse effects of chemotherapy and how to manage it at home.

(Uncontrolled cell division is the root cause of cancer and other malignant disorders. The proliferating cells can either migrate into different tissues directly or through the circulatory system)(14)

(Urolithiasis is a common disease, representing a relevant public health problem worldwide with a prevalence of 8.8% in the USA and annual health care costs of USD 3.8 billion 1 Although kidney stones initially often remain asymptomatic, treatment is frequently performed to prevent future problems associated with the disease (e.g. renal colic, urinary tract infections and impairment of kidney function)(15)

CONCLUSIONS:

Breast cancer is the most prevalent kind of cancer. Additionally, individuals have various chronic conditions and have little knowledge about self-care. The research showed that using face-to-face discussions as an intervention was helpful in enhancing knowledge about self-management. The research demonstrates a significant increase in knowledge from the pre-test to the post-test among the patients. The findings indicated a significant improvement in the participants' knowledge after receiving the instructional intervention, especially those who had poor knowledge levels before the program. Patients' knowledge is positively influenced by their age and degree of education.

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