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Association between knowledge about chemotherapy for patients with cancer and demographic characteristic in Al-Nassiriah city

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ABSTRACT

To find out the relationship between cancer patients' knowledge and demographic characteristics of age, gender, and educational level in the Cancer Specialist Centre in Al-Haboubi Teaching Hospital and Al-Nasiriyah Teaching Hospital (Cancer blood diseases). A quasi-experimental design is conducted through the application of a pre-test and post-test approach for the study and control groups from a non–probability (purposive) sample of (110) patients treated at the Blood Disease and Oncology Centre Each group contains (50) patients as control, study groups, and 10 patients are pilot study. An instrument is constructed that is comprised of two parts; the first part consists of demographic data for a study sample which is consisted of (5) items of age, gender, occupation education, and marital status The second part is multiple choice questions related to patients' knowledge which is consisted of three domain Validity and reliability of the instrument are determined through a pilot study. The findings of the study show that there are no statistically significant differences between knowledge about chemotherapy for patients with Cancer with their age and gender (p-value>0.05). While statistically significant differences between knowledge about chemotherapy for patients with Cancer with their educational level. Based on the findings of this research, the researcher has reached the following In the pre-test and post-test, there is a significant relationship between cancer patients' knowledge and demographic characteristics of age and gender, but no significant relationship was found between patients' knowledge of education level.

Key words: chemotherapy, cancer, oncology, nursing

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INTRODUCTION

Globally, there were 17.0 million new instances of cancer and 9.5 million cancer-related deaths in 2018, according to estimates from the International Agency for Research on Cancer [1]. Simply because of population expansion and aging, it is anticipated that by 2040 there would be 16.3 million cancer deaths and 27.5 million new cancer cases worldwide, Due to the rising frequency of risk factors like smoking, poor food, physical inactivity, and fewer pregnancies in economically developing nations, the burden will likely grow in the future [1].

Many methods, including surgery, radiation, and chemotherapy, are used to treat cancer. Local treatments like surgery and radiotherapy are used to get rid of or kill minor tumours or shrink big ones. In contrast, chemotherapy is a comprehensive strategy that employs medications to slow or stop tumour growth, restrict or stop the spread of cancer cells, and/or relieve cancer symptoms like pain (palliative chemotherapy). Chemotherapy medications modify cellular activity during one or more phases of the cell cycle, having an impact on both healthy and malignant cells [2].

The side effects related to cancer chemotherapy depend on the type of medication, dose, recurrence, term of organization, and whether they are utilized in combination. It can be partitioned into short-term and long-term side effects. The short-term impacts incorporate emesis, diarrhoea, untimely menopause, infertility, nausea, weight loss, stomatitis, etc. whereas the long-term impacts include alopecia, secondary danger, myelo-suppression, neuropathy, anaemia, and weakness [3]. Although chemotherapy was presented in the 1940s, patients need information approximately chemotherapy and its side effects, causing a burden on quality of life. Subsequently, the information concerning chemotherapy is very much fundamental among cancer patients as well as in the normal population [4]. To protect the patient's life, nurses who care for those receiving chemotherapy need to possess a particular understanding. Therefore, where carelessness or error occurs during chemotherapy treatment, it may harm the patient's life. Consequently, both the patient and the nurse can greatly benefit from teaching sessions on this topic [5]. This study recommended providing them with scientific resources related to chemotherapy nursing intervention [6].

METHODS

The purpose of this study is to find out the relationship between cancer patients' knowledge and demographic characteristics of

age, gender, and educational level in -patients admitted to the Cancer Specialist Centre in Al-Haboubi Teaching Hospital and Al-Nasiriyah Teaching Hospital (Haematology unit).

A quasi-experimental design was with the application of a pre-test/post-test approach for the study group and control group after implementation of an educational program. Data collection was done at two times: baseline data (before any intervention was provided to the study group) and 21 days after g iving t he educational program (in the study group). The period of the study was from December. A non-probability (purposive) sample had been selected to obtain representative and accurate data. The size of the sample was (110) for patients with cancer who received chemotherapy the sample was divided into two groups each one consisting of (50) patients as the control group, the study group, and (10) in the pilot study. The study group was exposed to an educational program, while the control group was not.

The study instrument consists of three parts including the following:

Part 1: The Demographic and Socio-Demographic Characteristics of patient's cancer (age, gender, level of education, occupation, educational level, address, marital status, residency).

Part II: The patient's medical information: to be filled in by the researcher. The second part of the questionnaire was comprised of eight items.

Part III: Knowledge about Chemotherapy for Patients with Cancer. The part of questionnaire consists of three sections for each part, a group of items All items measured on three-point Liker scale was used for rating the item) I know, not Certain, and I don't know). Reliability coefficients of the studied questionnaire concerning internal consistency (Alpha Cronbach) = 0.748 good.

RESULTS

Table 1 show that thirty-five percent of the sample between 49 years-59 years, more than half in the study group between 49 years-59 years, and less than half of the control study between 39 years-48 years. The study group had a female gender ratio of 86.0%, and the control group had a male ratio of 66%. Both The study group and the control group had 54.0%, 68.0%, respectively. According to educational level showed that the study group was equally percent between don't read or write and graduated from primary school, while the control group and total study sample were have graduated from primary school.

Table 2 shows that there are no statistically significant differences between knowledge about chemotherapy for patients with Cancer with their age (p>0.05) when analysed by ANOVA.

Tab. 1. Descriptive statistic of sample demographical characteristics of both study and control group n=100 patients

Variables	Classification	Study Group		Control Group		Total	%
		F	%	F	%	F	
Age/years	19 years-28 years	4	8	9	18	13	13
	29 years-38 years	6	12	4	8	10	10
	39 years-48 years	10	20	22	44	32	32
	49 years-59 years	27	54	8	16	35	35
	60 years and more	3	6	7	14	10	10
Total		50	100	50	100	100	100
Gender	Male	7	14	17	34	24	24
	Female	43	86	33	66	76	76
Total		50	100	50	100	100	100
Marital Status	Single	8	16	12	24	20	20
	Married	27	54	34	68	61	61
	Absolute	4	8	1	2	5	5
	Widower	6	12	0	0	9	9
	Separated	5	10	3	6	5	5
Total		50	100	50	100	100	100
Educational Level	Don't Read or Write	11	22	12	24	23	23
	Read and Write	7	14	2	4	9	9
	Graduated from Primary School	11	22	18	36	29	29
	Graduated from Secondary School	9	18	8	16	17	17
	Graduated from College	6	12	6	12	12	12
	Graduated from institute	6	12	3	6	9	9
	Graduated from a Master's or PhD	0	0	1	2	1	1
Total		50	100	50	100	100	100

Freq: frequency, %: Percentage

Tab. 2. Distribution and differences of effectiveness of education program on knowledge about chemotherapy for patients with cancer their age

Knowledge Patients		No.	Pre-test (Mean ± S.D.)	Post 2 (Mean ± S.D.)
Age (Years)	19 years-28 years	4	1.6619 ± .15168	3.2214 ± .69979
	29 years-38 years	6	1.6992 ± .27331	2.8452 ± .04946
	39 years-48 years	10	1.9286 ± .47744	3.0190 ± .44722
	49 years-59 years	27	1.8635 ± .26340	2.9434 ± .22154
	60 years and more	3	1.4762 ± .14968	2.8524 ± .06442
Total		50	1.8174 ± .32114	2.9635 ± .31927
Statistics			F =1.841, P = 0.138	F =1.057, P = 0.389

$\bar{x}$ ± S.D.=Arithmetic Mean $\bar{x}$ and Std. Dev. (S.D.), No. = Number of frequencies, F = Fisher test , d.f. = degree of freedom, P = probability value.

Tab. 3. Distribution and differences of effectiveness of education program on knowledge about chemotherapy for patients with cancer their gender

Knowledge Patients		No.	Pre-test Mean ± S.D.	Post 2 Mean ± S.D.
Age (Years)	Male	7	1.7463 ± 0.25743	2.8395 ± 0.07731
	Female	43	1.8290 ± 0.33147	2.9837 ± 0.33924
Total		50	1.8174 ± 0.32114	2.9635 ± 0.31927
Statistics			F=0.395 P=0.533	F=1.235 P=0.272

x̄ ± S.D.=Arithmetic Mean x̄ and Std. Dev. (S.D.), No. = Number of frequencies, F = Fisher test, d.f. = degree of freedom, P=probability value

Tab. 4. Distribution and differences of effectiveness of education program on knowledge about chemotherapy for patients with cancer with their educational level

Knowledge Patients		No.	Pre-test Mean ± S.D.	Post 2 Mean ± S.D.
Educational Level	Don't Read or Write	11	2.9126 ± 0.24375	1.6476 ± 0.26929
	Read and Write	7	2.8816 ± 0.08906	1.7177 ± 0.14351
	Graduated from Primary School	11	2.8567 ± .04126	1.7719 ± 0.25261
	Graduated from Secondary School	9	3.2032 ± 0.60884	1.7423 ± 0.27624
	Graduated from College	6	3.0214 ± 0.34633	2.2056 ± 0.43311
	Graduated from institute	6	2.9310 ± 0.07245	2.0532 ± 0.25317
Total			2.9635 ± 0.31927	1.8174 ± 0.32114
Statistics			F =1.541 P = 0.197	F = 4.452 P =0 .002

Table 3 shows that there are no statistically significant differences between knowledge about chemotherapy for patients with Cancer with their gender (p>0.05) when analysed by ANOVA. Table 4 shows that there are statistically significant differences between knowledge about chemotherapy for patients with Cancer with their educational level (p>0.05) when analysed by ANOVA.

DISCUSSION

Results revealed that the majority of the study group age was within the age group 49 years-59 years accounted for (54.0%), while the control group age 39 years-48 years accounted for (44.0%), So the most of total study sample age group was in the age group 49 years-59 years accounted for (35.0%) among all study sample show that highest percentage 30.0% in the age group of (50-59) years in the study group with mean age (44.8 ± 11.1), while the control group 30.0% of the sample are the age group with mean age (48.4 ± 11.6) [7].

Relatively to the gender of the study sample were female consider a major percent of the overall study and control group and also within total were females accounted for (76.0%) of all study samples. Regarding marital status, most of the study and control groups were married, and then also within total were married among all study samples, like, most of the sample are females (68%) in the study group and (60%) in the control group [8].

Unlike who Al-Jubouri et al., showed that 52.8% of the study sample was male. Nearly, half of the study sample. Concerning marital status most of the study and control groups were married and then also within total were married among all study samples. Also Handi et al., the marital status the majority were married 39(65%) [9,10].

The educational level that showed the study group equal percent between Don't read or write and graduated from primary school 22.0, while the control group and total study sample were have graduated from primary school 36.0, 29.0 respectively, supported by the study done by Sattar and Al-Mallah, Graduated from Primary School (n=98; 39.2%) A study done by (n=151: 69.9%) [11]. In this table 2 and 3 (shows that there are no statistically significant differences between knowledge about chemotherapy for patients with Cancer with their age (p-value>0.05), P=0.389 and gender (p-value> 0.05, P=0.272. The result is supported by the study done [12]. Findings showed there was a no-significant relationship between patients' knowledge and their demographic data where p=0.494. Finally the result in table 4 shows that there are statistically significant differences between knowledge about chemotherapy for patients with cancer with their educational level.

CONCLUSION

The study confirms that there is a lack of patients with cancer knowledge about chemotherapy in pre-test but all are improving in post-test after the applied education program. The study revealed that there are statistically no significant differences between knowledge about chemotherapy for patients with cancer with their age and gender, while there are statistically significant differences between knowledge about chemotherapy for patients with cancer with their level of educational. The researcher recommends an intensive population-based education program can be conducted to improve cancer patients' knowledge of chemotherapy.

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