

Effectiveness of Side Effect Management Oriented Education Program on nervous and integumentary systems for Patient Undergo Chemotherapy in Sulaimani City

فعالية العناية بالتأثيرات الجانبية للتعليم الموجه على الجهاز العصبي والجلد لدى مرضى العلاج الكيماوي في مدينة السليمانية

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الخلاصة

الهدف: تهدف الدراسة لتحديد فاعلية برنامج تثقيفي موجه على معارف المرضى حول العناية بالاعراض الجانبية للعلاج الكيماوي في مدينة السليمانية

المنهجية: اختيرت عينة غرضية (غير احتمالية) (40) مريضاً، (20) مريضاً منهم اختير كعينة ضابطة، بينما اختير الـ (20) والعشرون من الاول من تشرين الاول ولغاية الحادي والثلاثون من تشرين الاول / 2011 لاختبار ثبات ومصداقية محتوى استمارة الاستبيان. وجمعت البيانات الخاصة بالدراسة من خلال استخدام

(129) فقرة تضمنت معارفهم، وصفاتهم الديموغرافية. تم تحقيق ثبات أدوات القياس من خلال استخدام معامل ارتباط بيرسون والذي كانت نتيجته (0.92). أما مصداقية أدوات القياس فقد تحققت من خلال عرضها على مجموعة من الخبراء لغرض تقويم درجة مصداقيتها. وتم تحليل البيانات باستخدام اسلوب تحليل البيانات الاحصائي الوصفي (التوزيع التكراري، النسبة المئوية، الوسط الحسابي والكفاءة النسبية) واسلوب تحليل البيانات الاحصائي الاستنتاجي (معامل الارتباط بيرسون، واختبار تي)

النتائج: بينت النتائج ان فعالية اثر البرنامج على عينة الدراسة مقارنة بالعينة الضابطة بزيادة المعارف عندها وبصورة واضحة ومتباينة **التوصيات:** اوصت الدراسة بتزويد المرضى بكتيبات واصدارات خاصة تتضمن التوجيهات والارشادات الضرورية بالعناية بالاثار الجانبية للعلاج الكيماوي. توفير مركز خاص بالمعلومات في المستشفى لتلقي معاناة المرضى واعطاء المعلومات الضرورية التي تواجه المرضى خلال فترة العلاج.

Abstract:

Objectives: The present study aims to determine the improvement side effect management oriented educational program for patients undergo chemotherapy in Sulaimani city.

Methodology: Non – probability (purposive sample), the study sample consists of (40) clients, (20) clients were selected as (a study group), and another (20) clients were selected as (control group). A questionnaire was developed as a tool of data collection for the purpose of the study. A pilot study was carried out to test the reliability of the questionnaire for the period from 1st October until 31st October/ 2011. The pre and post - test approach was applied to the study and control groups as mean for the quasi – experimental design when the education program was implemented in the period from 28th November 2011, to the 29th 2011. A questionnaire format was used for data collection which consisted of (8) three parts (129) items, including their knowledge, practices, and demographic characteristics. Instrument validity was determined through content validity, by a panel of experts. Reliability of the instrument was determined through the use of Pearson correlation coefficient for the test-retest approach, which is (0.92) for their knowledge. Data were analyzed through the application of the descriptive statistical data analysis approach (frequency, percentage, mean, and relative sufficiency), and inferential statistic data analysis approach (person correlation, t - test).

Results: The study concluded that an education program had a positive impact on level of information among the study group.

Conclusion: There is obvious increasing in the client's information of the study group compared with control group regarding pre and post – test.

Recommendation: The study recommends providing of special manual or guideline includes all the instructions of chemotherapy treatment. And an informational office should be established in the hospital to supplement them with any information and help during chemotherapy treatment

Keywords: effectiveness, education program, chemotherapy.

INTRODUCTION:

Cancer is a major public health problem in the United States and many other parts of the world. Currently, one in 4 deaths in the United States is due to cancer. And it is the second most common cause of death, accounting for 26% of all deaths ⁽¹⁾. Cancer is defined as a group of diseases characterized by uncontrolled growth and spread of abnormal cells. Cancer has more than one hundred different types that vary in diagnostic detect ability, state of cellular differentiation, rate of growth, invasiveness, metastatic potential and response to treatment ⁽²⁾. Cancer is treated with different methods such as surgery, radiation, and chemotherapy. Surgery and radiotherapy are local treatments used to remove or kill small tumors or reduce the size of large tumors. In contrast, chemotherapy is a systemic approach that uses drugs to stop or slow tumor growth, control or prevent the spread of cancer cells, and/or relieve cancer symptoms such as pain (palliative chemotherapy). Chemotherapy drugs affect both normal and cancer cells by altering cellular activity during one or more phases of the cell cycle ⁽³⁾. Chemotherapy means the use of drugs to treat cancer. These special drugs can kill cancer cells and are sometimes called cytotoxic (“cyto” meaning cell and “toxic” meaning injure or kill). Many of these drugs are obtained from natural sources such as plants while others are man made. There are many different chemotherapy drugs. These drugs are often used in different strengths and combinations ⁽⁴⁾. Understanding what cancer patients need to know and from whom they receive information during the course of care is essential to ensuring quality care. They reviewed 112 articles published from 1980 to 2003 and developed a typology summarizing cancer patients’ information needs and the sources from which they receive information. The majority of articles focused on information needs and sources during the diagnosis and treatment phase ⁽⁵⁾.

OBJECTIVES:

Assess the needs of the patients undergo chemotherapy. And determine the improvement side effect management oriented educational program for patients undergo chemotherapy.

METHODOLOGY:

Quantitative / quasi – experimental design was carried out throughout the present study with the application of test - retests approach for the study and control group for patients that receiving chemotherapy treatment in Sulaimani city from the period of 28th November 2011, to the 29th December 2011. The program sessions were managed by three methods, booklets, lectures, and direct discussions with patients.

A non - probability purposive sample of (40) clients (male and female), who were working in spinal cord injuries units were selected. The sample in this study was divided into two groups; (20) clients for study group, were exposed to the clients educational program, and (20) clients for control group, were not exposed to the intervention of the educational program. Each group had proximately the same demographic characteristics as possible. The objective of this assessment is to identify the clients’ needs for an educational program. The assessment was carried out during the period from (1st October until 31st October/ 2011). To asses clients’ knowledge

needs the researcher construct questionnaire format which consist of (8) divisions (positive and negative questions). The researcher interviewed all clients, and each client was given a time period between (25 -30) minutes to answer the questions.

RESULTS:

Table (1): Distribution of the Sample by their demographic of the Study Sample by frequency and percentage

No	Variable	Type of variable	F	Percentage (%)
1	Gender	Male	5	25
		Female	15	75
2	Age group	20 – 29 years	3	15
		30 – 39 years	5	25
		40 – 49 years	4	20
		50 – 59 years	6	30
		60 years	2	10
3	Marital statues	Unmarried	2	10
		Married	18	90
4	Education levels	Primary	8	40
		Secondary	8	40
		High school	4	20

This table shows that the majority of the sample are females (75%), most of them (30%) are (50 – 59) years old age group, majority of them (90%) are married, and majority of the sample low levels of education (40%) primary and (40%) secondary.

Table (2): Patient's information items of (Nervous system) and side effects of chemotherapy treatments, for both study and control group at (pretest)

No	Questions items	Study group						Control group							
		True		False		M.S	R.S%	Assess.	True		False		M.S	R.S%	Assess.
		F %	F %	F %	F %				F %	F %					
1	During achieve daily duty I should wash my hands	0	0	20	100	1	50	F	0	0	20	100	1	50	F
2	When I take my bath it prefer to check the water temperature by myself	0	0	20	100	1	50	F	0	0	20	100	1	50	F
3	I should take caution during using any sharp things	4	20	16	80	1.2	60	F	1	5	19	95	1.05	52.5	F
4	Take caution when I have been in (Bedroom, or kitchen, or living room)	2	10	18	90	1.1	55	F	0	0	20	100	1	50	F
5	When I feel I am tired and fatigue, I should take rest	2	10	18	90	1.1	55	F	0	0	20	100	1	50	F
6	I should take enough rest when I have abdominal pain	0	0	20	100	1	50	F	0	0	20	100	1	50	F
7	When I feel some pain especially abdominal I do Some exercises	0	0	20	100	1	50	F	0	0	20	100	1	50	F
8	I avoiding take some medicine when I have pain like aspirin and indocin	0	0	20	100	1	50	F	0	0	20	100	1	50	F
9	Always I voiding, (Smoking and drinking, or Soft drink, or both)	8	40	12	60	1.4	70	F	8	40	12	60	1.4	70	F
10	When there is abdominal pain or spasms I try to do some deep respirations	4	20	16	80	1.2	60	F	2	10	18	90	1.2	60	F
11	I avoid foods that reach of desserts	17	85	3	15	1.85	92.5	P	16	80	4	20	1.8	90	P
12	I avoiding Pickles and spices with eating	10	50	10	50	1.5	70	F	5	25	15	75	1.25	62.5	F
13	Avoiding the fruits that increase stomach acidity like raw fruits and citrus	5	25	15	75	1.25	62.5	F	3	15	17	85	1.5	75	P
14	I do some exercises to decrease anxiety, depression and fatigue	9	45	11	55	1.45	72.5	F	1	5	19	95	1.05	52.5	F

This table revealed that information of study and control group was presented (Passed) in item number (11) and they (failed) in other items, by frequency, percentages, mean of scores, relative sufficiency, and assessment regarding (cut off point= 1.5, i.e. R.S.=75%).

Table (3): Patient's information items of Nervous system) and side effects of chemotherapy treatments, for both study and control group at (posttest).

No	Questions items	Study group						Control group							
		True		False		M.S	R.S%	Assess.	True		False		M.S	R.S%	Assess.
		F	%	F	%				F	%	F	%			
1	During achieve daily duty I should wash my hands	12	60	6	40	1.6	80	P	0	0	20	100	1	50	F
2	When I take my bath it prefer to check the water temperature by myself	19	95	1	5	1.95	97.5	P	0	0	20	100	1	50	F
3	I should take caution during using any sharp things	20	100	0	0	2	100	P	3	15	17	85	1.5	75	P
4	Take caution when I have been in (Bedroom, or kitchen, or living room)	20	100	0	0	2	100	P	4	20	16	80	1.2	60	F
5	When I feel I am tired and fatigue, I should take rest	20	100	0	0	2	100	P	3	15	17	85	1.5	75	P
6	I should take enough rest when I have abdominal pain	13	65	7	35	1.65	82.5	P	0	0	20	100	1	50	F
7	When I feel some pain especially abdominal I do Some exercises	15	75	5	25	1.75	87.5	P	0	0	20	100	1	50	F
8	I avoiding take some medicine when I have pain like aspirin and indocin	13	65	7	35	1.65	82.5	P	2	10	18	90	1.2	60	F
9	Always I voiding. (Smoking and drinking, or Soft drink, or both)	20	100	0	0	2	100	P	17	85	2	15	1.85	92.5	P
10	When there is abdominal pain or spasms I try to do some deep respirations	20	100	0	0	2	100	P	8	40	12	60	1.4	70	F
11	I avoid foods that reach of desserts	20	100	0	0	2	100	P	20	100	0	0	2	100	P
12	I avoiding Pickles and spices with eating	20	100	0	0	2	100	P	17	85	3	15	1.85	92.5	P
13	Avoiding the fruits that increase stomach acidity like raw fruits and citrus	19	95	1	5	1.95	97.5	P	12	60	8	40	1.6	80	P
14	I do some exercises to decrease anxiety, depression and fatigue	9	45	11	55	1.45	72.5	F	1	5	19	95	1.05	52.5	F

This table shows that information of study group were presented (Passed) at all items, while for control they are (Passed) in items (3, 5, 9, 11, 12, 13, and 14), and they (failed) on all other items. by frequency, percentages, mean of scores, relative sufficiency, and assessment regarding (cut off point= 1.5, i.e. R.S.=75%).

Table (4): Patient's information items of (Integumentary system) and side effects of chemotherapy treatments, for both study and control group at (pretest)

No	Questions items	Pretest					Posttest								
		True		False		M.S	R.S%	Assess.	True		False		M.S	R.S%	Assess.
		F	%	F	%				F	%	F	%			
1	For promoting god skin active and vitality I take bath or shower every	0	0	20	100	1	50	F	0	0	20	100	1	50	F
2	I use medical shampoo for washing hair	5	25	15	75	1.25	62.5	F	0	0	20	100	1	50	F
3	During bathing I avoid chemicals substances	2	10	18	90	1.1	55	F	0	0	20	100	1	50	F
4	Always I cut my hair as very short style	12	60	8	40	1.6	80	P	7	35	13	65	1.35	67.5	F
5	During combing hair I not use hair dryer plastic or material comb	14	70	6	30	1.7	80	P	6	30	14	70	1.3	65	F
6	I try to facets my hair to air every day	9	45	11	55	1.45	72.5	F	4	20	16	80	1.2	60	F
7	To decrease the side effect of treatment on the hair I try put ice bag on it, tighten my head	0	0	20	100	1	50	F	0	0	20	100	1	50	F
8	When exposure to sunlight I use some creams	5	25	15	75	1.25	62.5	F	10	50	10	50	1.5	75	P
9	For removing body hair always I use electrical razing	0	0	20	100	1	50	F	0	0	20	100	1	50	F
10	During bath I not use fiber things or wash brush or scrubs skin	1	5	19	95	1.05	52.5	F	0	0	20	100	1	50	F
11	To prevent skin irritations I try to not use alcoholic perfumes	7	35	13	65	1.35	67.5	F	5	25	15	75	1.25	62.5	F
12	For bathing I use warm water	4	20	16	80	1.2	60	F	4	20	16	80	1.2	60	F
13	When I start the treatment I try to use head cover or wig	19	95	1	5	1.95	97.5	P	17	85	3	15	1.85	92.5	P
14	Hair will be growth again after 3 – 4 months	0	0	20	100	1	50	F	0	0	20	100	1	50	F
15	To strengthen the nails I use special products	5	25	15	75	1.25	62.5	F	6	30	14	70	1.3	65	F

This table revealed that information of study group were presented (Passed) in items (4, 5 and 13), and the (failed) in all other items, while the control group (Passed) at items (8, and 13) and (failed) on others. By frequency, percentages, mean of scores, relative sufficiency, and assessment regarding (cut off point= 1.5, i.e. R.S.=75%).

Table (5): Patient's information items of (Integumentary system) and side effects of chemotherapy treatments, for both study and control group at (posttest)

No	Items	Study group						Control group							
		True		False		M.S	R.S%	Assess.	True		False		M.S	R.S%	assess
		F	%	F	%				F	%	F	%			
1	For promoting god skin active and vitality I take bath or shower every	16	80	4	20	1.8	90	P	0	0	20	100	1	50	F
2	I use medical shampoo for washing hair	20	100	0	0	2	100	P	4	20	16	80	1.2	60	F
3	During bathing I avoid chemicals substances	14	70	6	30	1.7	85	P	0	0	20	100	1	50	F
4	Always I cut my hair as very short style	20	100	0	0	2	100	P	15	75	5	25	1.75	87.5	P
5	During combing hair I not use hair dryer plastic or material comb	20	100	0	0	2	100	P	14	70	6	30	1.7	85	P
6	I try to facets my hair to air every day	20	100	0	0	2	100	P	17	85	3	15	1.85	92.5	P
7	To decrease the side effect of treatment on the hair I try put ice bag on it, tighten my head	12	60	8	40	1.6	80	P	0	0	20	100	1	50	F
8	When exposure to sunlight I use some creams	20	100	0	0	2	100	P	15	75	5	25	1.75	87.5	P
9	For removing body hair always I use electrical razing	18	90	2	10	1.9	95	P	3	15	17	85	1.15	57.5	F
10	During bath I not use fiber things or wash brush or scrubs skin	17	85	3	15	1.85	92.5	P	2	10	18	90	1.1	55	F
11	To prevent skin irritations I try to not use alcoholic perfumes	20	100	0	0	2	100	P	15	75	5	25	1.75	87.5	P
12	For bathing I use warm water	20	100	0	0	2	100	F	17	85	3	15	1.85	92.5	P
13	When I start the treatment I try to use head cover or wig	20	100	0	0	2	100	P	20	100	0	0	2	100	P
14	Hair will be growth again after 3 – 4 months	20	100	0	0	2	100	P	2	10	18	90	1.1	55	F
15	To strengthen the nails I use special products	18	90	2	10	1.9	95	P	15	75	5	25	1.75	87.5	P

This table shows that information of study group were presented (Passed) at all items, while for control they are (passed) in items (4, 5, 6, 8, 11, 12, 13, and 15) and they (failed) on other items. By frequency, percentages, mean of scores, relative sufficiency, and assessment regarding (cut off point= 1.5, i.e. R.S.=75%).

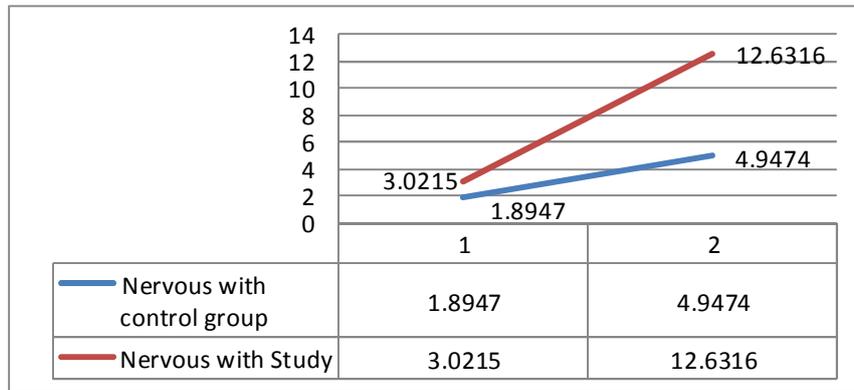


Figure (1) This figure shows the correlation between the average of mean (x) response for both (control and study group) in pre and posttest regarding nervous system items.

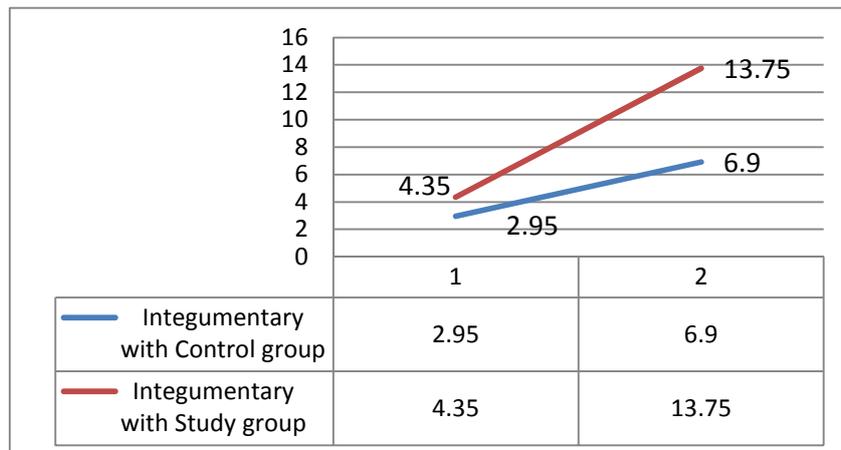


Figure (2) This figure shows the relation between the average (x) response for both (control and study group) in pre and posttest regarding integumentary system items.

DISCUSSION:

Females were (75%) which are the majority of the study sample who like to shier in this program, while the male were presented (25%) table (1). Because the female have more time than the males because of their works and responsibility, and women more enthusiastic than men. It has long been clear that cancer is a disease of aging. While children and younger adults are of course afflicted by certain types of the disease, the vast majority of cases occur in people over 50. The age of the study group, the finding indicated that (30%) of the sample were (50 -59 years), in addition (10%) were

(60 years), and (25%) of them were (40 -49 years), which mean the majority of them (65%) are near to aging peoples, while (20%) of the study group (30 – 39 years), and only (15%) of them were (20 – 29 years), which agree with (Svetlana, Ukrainsevs, and Anatoli, 2003)⁽⁶⁾. When individuals get older, the risk of many chronic diseases increases. This increase is in agreement with common theories of aging, such as mutation accumulation, wear and tear, antagonistic pleiotropic, etc.

In fact some subjects of the study represent (35%) of them were young; this is because our region has been exposed to many wars that lead them to this type of diseases.

As a fact, the level of education is an effective factor for getting a lot of information for live events. An increasing number of older people are treated for cancer. Several factors, such as comorbidity and sensory deficits, occur more frequently in older patients than in younger patients. In addition, their life circumstances, values, and preferences may differ⁽⁷⁾. The study found the majority of the sample (80%) divided in two group half of them (40%) had primary level of education while the other (40%) had secondary level of education, and only (20%) had high school levels, and this shows only the low level educational patient agree to sharing with our program, and the patient whom had high education did not like to sharing this program because most of them they are proud on them self or they feel critical to sit with low level of education and they thing they do not need more information, or they get it from other sources about the chemotherapy side effects.

Table (2) show that (7.14%) of the study group, and (14.28%) of the control group passed for pre – test. But after the program the study group passed in all items, while the control group passed in (50%) of the items (table 3).

Table (4) show the pre – test of both study and control groups in regard to their knowledge about chemotherapy side effect in integumentary system, which they passed in some of items, for study group only in (3) items which represent (15%) of the items, while the control group passed in (2) items, which represent (13.33%), and they failed in all other items. Compared with table (5) show that the study group passed in all items after attending the program, while the control group passed in (8) items, which represent (53.33%) of the items in post – test, which mean they don't get enough knowledge like study group.

Generally speaking, this big increase in the average of means among study group compared with control group indicates the impacts of our educational program on their level of information which is very delightfully, and concluded that really our cancer clients highly needed for continuous learning input regarding their treatment and daily progress (figures 1, and 2). (Baribeault, 2008)⁽⁸⁾ explained that adult learners must know why they needed the learning and wanted to be involved with the planning and evaluation of their instructions, and the figures 1 and 2 shows that the study group had sharp increase their knowledge after they attended the educational program while the control had some elevated in their knowledge regarding contact with other patients.

CONCLUSION:

The majority of subjects were females, and their ages over (40) years old. And their level of education was primary and secondary level. There is obvious increasing in the client's information of the study group compared with control group regarding pre and post – test.

RECOMMENDATION:

1. Special programs should be established in concerned agencies regarding effects of chemotherapy treatments on the client's life.
2. Provider of special manual or guideline includes all the instructions of chemotherapy treatment submitted to each cancer client free of charge.
3. Provision of specialist nursing staff in the hospital working as educators and supporting the client's as well as follow up them.
4. An informational office should be established in the hospital to supplement them with any information and help during chemotherapy treatment.

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