

## Self Instructional Booklet- Its Effect on Knowledge of Women with Uterine Cancer Undergoing Chemotherapy

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**Abstract:** Gynecological cancer women who receive chemotherapy experience groups of physical, psychological & social and functional role problems that have negative impact on their quality of life as the result of toxicity of chemotherapy. The present study aimed to evaluate the effect of using Arabic self-instructional booklets on knowledge of women with uterine cancer undergoing chemotherapy. An Intervention study was applied at gynecological oncology unit of Maternity hospital, in addition out and inpatient gynecological department of Oncology & Nuclear Medicine center of Ain Shams University. A purposive sample of 80 women were included in the study. They were divided into two equal groups (study and control). Data were collected through a structured interview sheet developed to collect the women's data and knowledge, in addition to supportive material as Arabic self-instructional booklets. Results of The study revealed statistical significant differences between study and control group in relation to talk knowledge scores regarding uterine cancer, chemotherapy side effects and self care measures to overcome these side effects which the study group had higher to talk knowledge score than control group. The study concluded that Arabic self-instructional booklets, seemed to have positive impact on women's knowledge regarding uterine cancer and chemotherapy. So the researchers recommended that utilization of Arabic self-instructional booklets for women at out and inpatient gynecological department of Oncology & Nuclear Medicine center and maternity hospital of Ain Shams University, developed to educational programs for gynecological cancer nurses about care measures regarding chemotherapy.

**Key words:** Self Instructional Booklet • Knowledge • Uterine Cancer • Undergoing Chemotherapy

### INTRODUCTION

Gynecological cancer remains as an important cause of morbidity and mortality among women worldwide. It accounts for approximately 20% of visceral cancers. Uterine cancer representing 33% of gynecological cancer [1]. Moreover, worldwide incidence and mortality rates (Per 100,000 women) of gynecological cancers due to uterine cancer are respectively as follows (43,470 and 7,950) [2].

Chemotherapy is a cornerstone of cancer treatment for many tumor entities. It is a method uses chemical agents or drugs to destroy cancer cells in the cell cycle or

use of chemicals or drugs to inhibit the growth and spread of cancer cells. Chemical agents will go through all the system of the body. However, some normal cells will be affected by chemotherapy such as cells lining the gastrointestinal tract, bone marrow cells and hair follicles causing side effects [3].

Toxic effects of chemotherapy for women receiving treatment of uterine cancer may include fatigue, nausea, vomiting, sleep disturbances; changes in bowel function, alopecia, stomatitis and altered sense of taste are common problems. The therapy also caused neutropenia, anemia and thrombocytopenia. It was evident that the results of cancerous condition as well as the

complications both from the illness itself and the chemotherapy had serious impacts on patient's quality of life [4].

The oncology nurses fill a number of roles across the continuum of care for patients receiving chemotherapy, including counseling patients on issues related to treatment completion, providing education about disease, chemotherapy, side effects and proper self-care behaviors which can minimize the side effects of chemotherapy, decrease symptom distress and improve quality of life [5]. And depending on Orem theory which emphasizes the importance of how one's own self care is important for maintain life, health development and well being; therefore, to perform self-care, patients must have a learned ability to meet their needs and access to re-sources to enhance their knowledge [6].

**Justification of the Study:** Uterine cancer women that are receiving chemotherapy may face physical problems that have negative impact on their quality of life. The ability of cancer patient to control chemotherapy side effects is limited due to lack of knowledge and awareness about disease, proper self care behavior & it's important especially during treatment to control and minimize chemotherapy side effects and improve quality of life. So these self-instructional booklets is designed to provide the patient with essential knowledge about uterine cancer, chemotherapy side effects and proper self care measures to manage the side effects.

**Aim of the Study:** This study aimed to evaluate the effect of Arabic self-instructional booklets on women's knowledge regarding uterine cancer, undergoing chemotherapy side effects and self-care measures to manage these effects.

**Research Hypothesis:** There is a positive effect of Arabic self-instructional booklets on women's knowledge regarding uterine cancer and chemotherapy.

## **MATERIALS AND METHODS**

**Study Design, Setting & Sampling:** Intervention design was conducted at gynecological oncology unit of Maternity Hospital and out & inpatient gynecological department of Oncology & Nuclear Medicine center of Ain Shams University. A Purposive sample of 80 women were included in the study divided into two equal groups

(Study and control), with the following criteria: diagnosed with uterine cancer, they should have been at least one session of chemotherapy and able to read and write.

**Tools of Data Collection:** A Structured interviewing questionnaire: was designed by the researchers based on related literature, it was including 40 questions divided into three parts: first Part: to assess sociodemographic characteristics of women as age, marital status, educational level and residence, Second part: to assess present history about uterine cancer as type of cancer, duration of the disease & side effects of chemotherapy and number of chemotherapeutic cycles, Third part: to assess women's knowledge regarding gynecological cancer, chemotherapy and self care related to chemotherapy side effects (Pre-post test format).

Ascoring system for knowledge related to uterine cancer and chemotherapy was developed according to the literature. Women's talknowledge scores were classified as incorrect poor or did not know (That is less than 50% correct answers), average (That is 50%-74%) an good (That is 75% or more correct answer).

**Asupportive Arabic Self -Instructional Booklet:** It consists of two parts; the first one concerned with providing the patient with the essential information about uterine cancer, definition, types, causes and treatment methods. While the second part about chemotherapy's treatment as definition, aims, route of administration, the most common side effects of it (Nausea, vomiting, anorexia, mucositis, constipation, fatigue, alopecia) and proper self-care measures that could apply to overcome those side effects.

**Validity & Reliability of Tools:** Tools review for appropriateness of items through an expert panel to assure content and validity then a pilot study was conducted for 8 women that represent 10% of the sample. The necessary modifications were done based on the pilot study finding such as (Omission of some questions from tool) in order to strengthen their contents or for more simplicity and clarity. These groups were excluded from the main study sample.

### **A Dministrative Design and Ethical**

**Considerations:** An official approval was obtained from the Faculty of Nursing, Ain Shams University. Also a letter containing the title and aim was directed to the

director of Ain Shams Maternity University Hospital & director of Oncology & Nuclear Medicine Center of Ain Shams University then the approval for data collection was obtained. Informed consent obtained from participants after explaining the purposes of the study, no harmful methodology used with participants, each participant had right to withdrawn from the study at anytime and Human rights were used.

**Field Work:** Data collection started and finished for ten months started from November 2012 to August 2013. It was collected during morning shift 3 days/ week from 9am to 3pm. The researchers started to data collected for control group then intervention group to avoid contamination of data. At the beginning of the interview the researcher explained to the women the aim of the study and then the oral consent of woman was obtained before the second cycle of chemotherapy. The questionnaire was full filled by the researcher in time ranged from 20-25 minutes on an individualized base. Assessment of women's knowledge regarding uterine cancer and chemotherapy was repeated after three months of intervention (Post-test). Self-instructional booklet was implemented and distributed for study group through 3 sessions each session ranged from 20-25 minutes on individual bases as patients cannot be gathered in the sessions because they didn't come regularly to the unit. The researcher give instruction to the patients according to specific side effects that patient had complained (Causes of it and how to manage it). There searcher started all sessions with summarizing the last session and objectives of the new session, also, the sessions ended by a summary of its contents and feedback from the patients was obtained to ensure that the patients got the maximum benefits. Evaluation was done through pre and Post- test to compare between control and study group regarding to their knowledge about gynecological cancer and self-care measures to manage chemo therapy side effects after 3 months of implementation of the self-care guide-lines.

**Statistical Design:** The collected data were organized and analyzed using the statistical package for social studies (SPSS). Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, mean and standard deviations for quantitative variables. Using chi square test to determine relation between qualitative data. A P-value  $>0.05$  indicates non-

significant result, the P-value  $<0.05$  indicates a significant and (P $<0.001$  indicates a highly statistically significant).

## RESULTS

Table 1 revealed that 29 % of the total sample, their age ranged from 50- $<60$  year and 76% of them were married. Regarding level of education, 48% of them had secondary education while 42% had basic education and 10% had university education. Concerning to their residence, 78% of total sample were from urban area.

Table 2 illustrates medical history of the studied patients; it was observed that uterine cancer, ovarian cancer and cervical cancer represented 34 %, 30% and 22% respectively among total study sample. In relation to duration of disease 31% of them suffered from cancer with less than 6 months and 95% had received more than four cycles of chemotherapy.

Table 3 describes the total patients' knowledge score about gynecological cancer & chemotherapy and self-care related to chemotherapy side effects among control group. It indicates that 78% of control group had poor knowledge in pre-test and 72% in post-test. The difference was statistically insignificant between pre and post-test P $>0.05$ .

Table 4 describes the patients' total knowledge score about gynecological cancer & chemotherapy among study group. It reveals that there were highly significant improvement in total knowledge scores of women regarding gynecological cancer (Definition, causes & treatment methods) and chemotherapy (Definition, aim, methods of administration and self care measures to overcome chemotherapy side effects cancer) during post test after intervention as compared to pre test p $<0.001$ .

Table 5 demonstrates comparison between control and study group regarding to their total knowledge score about gynecological cancer and chemotherapy. It shows that there was no statistical significant difference among both groups in the pre test before intervention P $>0.05$ . While there were highly statistical significant difference is observed among both groups in post test after intervention as a higher percentage of good knowledge among study group (P $<0.001$ ).

Table 6 clarify relation between patient's knowledge and their sociodemographic data before intervention. It indicates that, there were highly statistical significant relation between patient's knowledge and their socio demographic data (P $<0.001$ ).

Table 1: Socio-demographic characteristics of studied patients among both groups

Items	Control group N=40		Study group N=40		Total N=80	
	No	%	No	%	No	%
<b>Age (years):</b>						
-20 <30	9	22	8	20	17	21
-30 < 40	10	24	8	20	18	22
-40 <50	11	28	11	28	22	28
-50 -> 60	10	26	13	32	23	29
X ± SD	40.8 ±9.1		42.2 ± 9.3			
<b>Marital status</b>						
-Married	29	72	32	80	61	76
-Widow	6	16	5	12	11	14
-Divorced	3	8	2	6	5	7
-Single	2	4	1	2	3	3
<b>Level of education</b>						
Basic education	18	44	16	40	34	42
Secondary education	18	44	21	52	39	48
University education	4	12	3	8	7	10
<b>Occupation:</b>						
-Work	10	24	8	20	18	22
-Not work	30	76	32	80	62	78
<b>Residence:</b>						
-Rural	14	36	3	8	17	22
-Urban	26	64	37	92	63	78

Table 2: Present history of gynecological cancer among studied patients: (n=80)

Items	Control group N=40		Study group N=40		Total No=80	
	No	%	No	%	No	%
<b>Type of cancer</b>						
-Uterine cancer	13	32	14	36	27	34
-Cervical cancer	10	24	8	20	18	22
-Ovarian cancer	11	28	13	32	24	30
-Vaginal cancer	1	2	1	2	2	2
-Vulvar cancer	2	4	1	2	3	3
-GTN	3	10	3	8	6	9
<b>Duration of disease</b>						
-Less than 6 months	13	32	12	30	25	31
-6-12 months	11	28	11	26	22	27
-12-28 months	5	12	6	16	11	14
-18-24 months	11	28	11	28	22	28
<b>Number of chemotherapy cycles</b>						
-3 cycles	2	6	2	4	4	5
-4 + cycles	38	94	38	96	96	95

GTN: Gestational trophoblastic neoplasm

Table 3: Distribution of studied patients by total knowledge score about gynecological cancer and chemotherapy among control group: (n=40)

Items of knowledge	Control group n= 40						Test of sig	
	Pre test			Post test			Chi-square	P-value
	Poor	Average	Good	Poor	Average	Good		
	%	%	%	%	%	%	0.48	0.001
-Definition of gynecological Cancer	82	18	0	74	24	0		
-Causes of it	86	14	0	78	22	0		
-Treatment methods of it	72	28	0	72	28	0		
-Definition of chemotherapy	70	30	0	74	26	0		
-Aim of chemotherapy	80	20	0	78	22	0		
-Methods of administration	76	24	0	64	36	0		
Self care practices regarding chemotherapy side effects	78	22	0	66	34	0		
Total level of knowledge	78	22	0	72	28	0		

P > 0.05 non-Significant

Table 4: Distribution of studied patients by total knowledge score gynecological cancer and chemotherapy among study group: (n=40)

Items of knowledge	Study group (n=40)						Test of sig	
	Pre test			Post test			Chi-square	P-value
	Poor	Average	Good	Poor	Average	Good		
	%	%	%	%	%	%	85**	0.001
Definition of gynecological Cancer	84	16	0	0	10	90		
-Causes of it	86	14	0	0	14	86		
-Treatment methods of it	72	28	0	0	10	90		
-definition of chemotherapy	80	20	0	0	14	86		
-Aim of chemotherapy	84	16	0	0	16	84		
-Methods of administration	74	26	0	0	12	88		
Self care practices regarding most common chemotherapy side effects	80	20	0		10	90		
Total knowledge score	80	20	0	0	12	88		

\*\*P < 0.001 Highly Significant

Table 5: Comparison between control and study group regarding to their total knowledge score

Item	Control n = 40		Study n = 40		Total No	X2 Test, P Value
	No	%	No	%		
Pre test:						
Poor	31	78	32	80	63	0.31
Average	9	22	8	20	17	
Post test:						
Poor	29	72	0	0	29	39.7**
Average	11	28	5	12	16	
Good	0	0	35	88	35	

\*\*P < 0.001 Highly Significant P > 0.05 non-Significant

Table 6: Correlation between Patient's knowledge and their socio demographic data before intervention: (n=80)

Demographic data	Level of Patients Knowledge						r Test	P Value
	Poor n=63		Average n=17		Total No			
	No	%	No	%	No	%		
Age (years):								
20-<30	14	18	2	3	16	21	0.68	0.001
30< 40	12	15	6	7	18	22		
40-<50	16	20	7	8	23	28		
50 ->60	21	26	2	3	23	29		
Level of education								
Read & Write	18	22	2	2	20	24	0.97	0.001
Basic education	12	15	2	3	14	18		
Secondary educ.	32	40	6	8	38	48		
University educ.	2	2	6	8	8	10		
Occupation:								
Work	7	9	10	13	17	22		
Not work	57	70	6	8	63	78	0.79	0.001
Residence:								
Rural	12	15	6	7	18	22		
Urban	51	64	11	14	62	78	0.80	0.001

Highly statistical significant (p<00.01)

## DISCUSSION

Patients with uterine cancer suffer from a multitude of intense physical and psychological symptoms, regardless the stage of the disease, these physical and psychological symptoms adversely affect the health, family and work life problems and uncertainties for the future life impairs her social and spiritual health. These symptoms tend to be highly distressing to patients and are associated with reduced quality of life [7].

Cancer patients' ability to control symptoms and to maintain a reasonable quality of life is limited due to lack of knowledge, guidance and instructions from health care providers. Sooncology nurses have important roles in assessing patients for appropriate therapy and increasing their knowledge, improving self care activities and providing timely interventions to reduce therapy-associated toxicities and maximize treatment efficacy [8]. In the light of the previous study the current study conducted to evaluate the effect of self-care guideline on knowledge of women with gynecological cancer undergoing chemotherapy.

Regarding socio demographic characteristics of study sample, the present study indicated that 28% of sample were aged from 40<50 and 29% of them their age ranged from 50<60 year (Table 1). This finding is supported by Jorge & Silva [8], who mentioned that the age group of highest incidence of gynecological cancer is over 40 years.

As regard to medical history, the present study showed that uterine, ovarian and cervical cancer represented a higher percentage of gynecological cancer among total study sample. This result is supported by Cannistra & McGuire [9] who reported that the most common types of gynecological cancer are uterine, ovarian and cervical cancer. While this result disagreed with Nazik *et al.* [10], who found that the uterine and cervical cancer represented the lower percentage among different types of gynecological cancer. This difference may be due to the differences of age group among studied sample.

The present study was conducted at the second cycle of chemotherapy, this time selected to find out the drug's side effects, this could be experienced by the participant patients. In support to this point, Wilker & Buke [11] mentioned that chemotherapeutic agents caused side effects that can appear after few days, within few weeks, or months to years after chemotherapy administration.

The current study revealed that, after implementing of self care guideline, there was a highly significant improvement and increase in women's total knowledge scores among study group about gynecological cancer, chemo therapy side effects and self care measures to manage these side effects. Similarly, Mohamed [12], found increase in knowledge mean score three months after implementing instructional guideline about chemotherapy than before intervention. This may be

attributed to the efficacy and importance of patient education of different modalities in managing the disease and side effects of chemotherapy to improve quality of life.

The present study showed that more than three quarters of control and study groups had poor knowledge regarding gynecological cancer, chemotherapy and self care measures to overcome most common side effects of it during pretest before intervention with no significant difference between them. This could be explained by the fact that those patients didn't receive enough information about disease and how to deal with chemo therapy side effects from health care providers or the health professionals. As reported by Cooper *et al.* [13], the study participant who lack critical knowledge need to be educated about their gynecological cancer symptoms and risk and seek appropriate care.

The findings of current study also showed that, there was a highly significant difference between control and study groups during post test after intervention regarding total knowledge score as a higher percentage for good knowledge among study group. This showed the effect of using self care guideline among study group. This finding is supported by Mohammed [14], who revealed that there was no significant differences between study and control group subjects at pre intervention. While the results of postintervention revealed that study group showed a higher mean score of knowledge and self management about chemotherapy as compared to the control group, with significant statistical difference between them. The researcher views these findings as a result of nursing rehabilitation program about side effects of chemotherapy that was applied by him.

In the sameline, Subongkot *et al.* [15], found that the patient had improved knowledge score based on disease and treatment, chemotherapy to xici ties after receiving counseling by a pharmacist in the oncology team.

The results of present study revealed that there was a highly statistical significant ( $P < 0.001$ ) relation between patient's knowledge and the sociodemographic characteristics such as age, level of education, occupation and residence. This means that poor level of total knowledge score was associated with old age ( $< 50$ ), low level of education, women not working and from rural area. This result supported by Ali [16] who stated that the subject's information level was statistically significantly and with negative correlation with age, while there was positive association between education level and subject's knowledge level.

Also These findings disagreed with Mohammed [17], who illustrated that no statistical relation between patient's knowledge and other socio demographic characteristics such as age, marital status, level of education and income. Again the result is in consistent with Mohammed [12], who found no significant relation between knowledge scores and patient age, education, occupation and residence. The discrepancy among different study results could be explained by the differences in sample characteristics as the most of other study samples were illiterate and were from rural areas.

### CONCLUSION & RECOMMENDATIONS

Based on the results of the study, the researchers concluded that there was poor knowledge about gynecological cancer and chemotherapy among both groups before intervention, also there was significant impact of self care guide

On women's knowledge among study group related to disease, chemotherapy side effects and proper self care to overcome of these side effects as compared to control group with highly statistical significant differences between them.

In the light of the findings of the study, theres earcher recommended applying the developed self care guidelines at all chemotherapy units outpatient and in patients and educational programs should be developed for gynecological cancer women about self care measure regarding chemotherapy side effects before starting treatment cycles. Further research is needed to evaluate effect of self care guidelines on practices for women's with gynecological cancer undergoing chemotherapy.

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