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ORIGINAL ARTICLE

Effectiveness of Educational Program on Nurses Knowledge about Ovarian Cancer in Baghdad City Hospitals

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ABSTRACT

Background: Ovarian cancer affects a lot of people all over the world, and it has a lot of physical and psychological consequences. However, there are many misconceptions, symptoms are usually missed, and diagnosis is frequently delayed Meridith, B.(2018(.therefore enriching nurses knowledge about ovarian cancer very essential in order to improve nurses services for women with this dangerously diffused type of cancer.

Objectives : To determine the effectiveness of Educational program on nurses knowledge about ovarian cancer

Methods : A quasi-experimental,(two groups pretest –posttest) control group and study design is carried out in order to achieve objectives of the study by using the evaluation approach and implementation of education program at (Baghdad teaching hospital, oncology teaching hospital, Alyarmok teaching hospital).from to 7 September to 18 December, Non-probability a purposive of (72) of nurses (36) study group and (36) control group has been selected for the present study from three teaching Hospitals in Baghdad City from to 7 September to 18 December. The data collection tool contains (57) multiple-choice questions of nurses knowledge about ovarian cancer .

Results: The study showed a clear improvement after educational program in the information of nurses ,according to the results.

Conclusion : The study concluded that the nurses working in the field that deals with ovarian cancer have insufficient knowledge about ovarian cancer . The program has effect on nurses level of knowledge and practice about ovarian cancer during the two period of test ,the study sample have low level of knowledge (pretest) implementation of educational program and the level of ascend to high level (posttest) implementation of educational program

Keywords: Ovarian cancer, Educational program, Nurses, Knowledge .

INTRODUCTION

Ovarian cancer (OC) is the fifth greatest cause of cancer death worldwide, with the strongest fatality rate of all gynecological cancers. .(Miller KD, et al,2016).

There are many different histologic subtypes, each with unique molecular cytogenetics, tumor biology, and oncologic consequences. In the detection and treatment of ovarian cancers, imaging is extremely important. The hunt for novel imaging biomarkers for ovarian malignancies has piqued attention, since they can aid in early tumor diagnosis and act as crucial biomarker, guiding optimal treatment therapy.(Ganeshan, D. ,2021).

Because of its high recurrence rate and lack of early detection measures, ovarian cancer (OVCA) is one of the most fatal cancers, with a five-year relative survival rate of less than 50%. Depending on the histological type and stage of the tumor, current methods for OVCA patients include debulking surgery, chemotherapies, angiogenesis inhibitors, poly ADP-ribose polymerase (PARP) inhibitors, and immunotherapies. (Lanyu Li,etal,2021).

Depending on the histological type and stage of the tumor, current methods for OVCA patients include debulking surgery, chemotherapies, angiogenesis inhibitors, poly ADP-ribose polymerase (PARP) inhibitors, and immunotherapies. The majority of women have advanced disease (FIGO stage III), for which surgery and platinum-based cytotoxic chemotherapy are the standard of care. (Gordon C. , etal,2014).

Most patients with OC are discovered in the late stages due to a lack of early symptoms and good early screening diagnostic procedures, and the 5-year survival rate is barely 20–25 percent .(Bi, F., Chen, Y. & Yang, Q. ,2020).

Ovarian cancer makes up 3% of all female cancers and has one of the highest fatality rates among gynecological cancers. A high life expectancy of 93 percent is associated with early diagnosis.(M.Frij,2018).

The most prevalent and fatal ovarian cancer histotype is high-grade serous ovarian cancer (HGSOC). Chromosome instability (CIN, or a faster rate of chromosome gains and losses) is thought to be important in the genesis and development of HGSOC. (Epage C.C., etal,2021).

MATERIAL AND METHODS

Study design, sample and setting: A quasi-experimental,(two groups pretest –posttest) control group and study design was carried out a Non- probability a purposive of (72) of nurses (36) study group and (36) control group has been selected during data collection period from 7 September to 18 December and implementation of education program at (Baghdad teaching hospital, oncology teaching hospital and Alyarmok teaching hospital).

Data Collection and Tool: Data are collected by using the study instruments questionnaire, which consisting of three main axes (demographic and occupational data, items assessing nurses' knowledge about ovarian cancer which consist of 14 domains) , this is to assess nurses knowledge and the need to the educational program based on lecturing ,group discussion and role playing .scoring system for questionnaire score,1 for wrong answer and 2 for the correct answer for the multiple –choice questions , after that ,knowledge was classified in to three categories low level (1-1.33) ,moderate level (1.34-1.66), high level (1.67-2).the person correlation coefficient was used to measure the reliability of the tool ,the results of this calculation indicate that the correlation confection is acceptable (0.70). the validity of the questionnaire is tested by presenting it to 15 experts in the field of health and education .a score of 2 was given to the paragraph that is related to the observed phenomenon or closely related to the phenomenon ,and 1 was given to the paragraph that is not related to the consideration was given to modifying some elements according to the experts recommendations .the results of this calculation indicate that the degree of knowledge is acceptable for the experts.

Ethical consideration: The study proposal was approved by research ethics committee of the college of nursing ,university of Baghdad . the data was kept confidential in a password –protected file containing all data obtained during the study .all participants provided their oral and written consent after being told that participation was optional and that they had the right to read the study protocol and discussion the benefits and risks of participation with the researcher **.**

Statistical analysis: The primary data collected was encoded and analyzed using SPSS version 21,then the data was subjected to

descriptive analysis in the form of frequencies and percentage. Quantitative data were expressed by calculating the mean and standard deviation. The one-way ANOVA analysis was also used to find out the significance of the statistical differences between the variables of current study at the significance level of 0.05.

RESULTS

Table 1: Distribution of the sample by their demographic characteristics

Variables		Control group		Study group	
		F	%	f	%
Age	20-less than 30	17	47.2	19	52.8
	30-less than 40	9	25	9	25.0
	40-less than 50	7	19.5	7	19.4
	50-59	3	8.3	1	2.8
	Total	36	100	36	100.0
Marital status	Single	12	33.3	13	36.1
	Married	18	50	23	63.9
	Divorced	6	16.7	-	-
	Widowed	-	-	-	-
	Total	36	100	36	100.0
Level of education	Nursing high school graduate	15	41.7	17	47.2
	Medical institute graduate	14	38.9	13	36.1
	Bachelor's graduate	7	19.4	5	13.9
	Postgraduate Master's/PhD studies	-	-	1	2.8
	Total	36	100	36	100.0

The finding in table (1) indicated that in the control group, 47.2% of nurses at age (20-less than 30) years, 50% of them are married, 41.7% Nursing high school graduate, In the study group, 52.8% of nurses at age (20-less than 30) years, 63.9% of them are married, 47.2% Nursing high school graduate.

Table 2: Distribution of the sample by their occupational characteristics:

Variables		Control group		Study group	
		f	%	f	%
Name of hospital	Baghdad teaching hospital	15	41.7	16	44.4
	Oncology teaching hospital	16	44.4	10	27.8
	Alyarmok teaching hospital	5	13.9	10	27.8
	Total	36	100	36	100.0
Did you participate with training courses	No	14	38.9	20	55.6
	Yes	22	61.1	16	44.4
	Total	36	100	36	100.0
Number of training course	No	14	38.9	20	55.6
	1-3	10	27.8	8	22.2
	4-7	12	33.3	4	11.1
	8 & more	-	-	4	11.1
	Total	36	100	36	100.0
Period of training course	0	14	38.9	20	55.6
	5 days	22	61.1	16	44.4
	Total	36	100.0	36	100.0
Place of training course	Non	14	38.9	20	55.6
	Inside Iraq	22	61.1	16	44.4
	Outside Iraq	-	-	-	-
	Total	36	100.0	36	100.0
Years of experience	1-less than 6	17	47.2	21	58.3
	6-less than 11	9	25.0	8	22.2
	11-less than 16	4	11.1	2	5.6
	16-less than 21	3	8.3	2	5.6
	21-less than 26	3	8.3	2	5.6
	26-30	-	-	1	2.8
	Total	36	100.0	36	100.0
Source of information	academic study	-	-	1	2.8
	Health personal	18	50.0	25	69.4
	From TV/Radio	-	-	-	-
	From the Internet (Social Media / YouTube)	10	27.8	9	25.0
	Scientific book s and magazines	-	-	1	2.8
	Workshop/Training courses	8	22.2	-	-
	Total	36	100	36	100.0

The finding in table (2) indicated that in the control group, 44.4% from Oncology teaching hospital,41.7% from Baghdad teaching hospital,13.9 %from al-yarmok teaching hospital, 61.1% participated in training session for 5 days inside Iraq, 33.3% participated in 4-7 training session, 47.2% have 1-less than 6 years of service in nursing and 50% of them have health personal as source of information. In the study group, 44.4% from Baghdad teaching hospital,27.8% from oncology teaching hospital, 27.8%from al-yarmok teaching hospital, 44.4% participated in training session for 5 days inside Iraq, 22.2% participated in 1-3 training session, 58.3% have (1-less than 6) years of service in nursing and 69.4% of them have health personal as source of information.

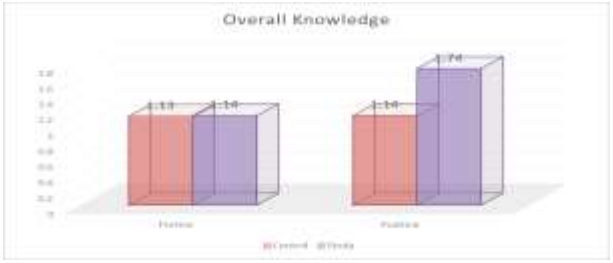

Figure 1: Nurses knowledge for control and study group at posttest

Table 3: Significant Differences in Nurses Knowledge with regard to Post-test among Study and Control Group.

Domain	Groups	Posttest					
		Mean	SD	t	df	P value	Sig
First domain: nurses' knowledge about anatomy and physiology about ovarian cancer	Control	1.13	.184	9.88	70	.000	HS
	Study	1.74	.307				
The second axis: the nurses' knowledge about the ovary:	Control	1.06	174	11.48	70	.000	HS
	Study	1.71	.288				
The third Domain: nurses' knowledge about the causes and risk factors for ovarian cancer.	Control	1.14	.244	11.17	70	.000	HS
	Study	1.8	.242				
Fourth Domain: Nurses' knowledge about ovarian cancer symptoms and signs:	Control	1.07	.144	13.99	70	.000	HS
	Study	1.73	.226				
Fifth Domain: Nurses' knowledge about ovarian cancer diagnosis and detection methods:	Control	1.05	.105	15.95	70	.000	HS
	Study	1.75	.223				
The sixth Domain: the knowledge of nurses about the classification and stages of ovarian cancer	Control	1.04	.116	16.12	70	.000	HS
	Study	1.77	.249				
The seventh Domain: Nurses' knowledge about ovarian cancer treatment	Control	1.15	.200	10.86	70	.000	HS
	Study	1.75	.239				
The eighth Domain: the nurses' knowledge about chemotherapy for	Control	1.11	.184	12.96	70	.000	HS

ovarian cancer patients:	Study	1.76	.223				
The ninth Domain: nurses' knowledge about radiotherapy for ovarian cancer	Control	1.12	.219	8.92	70	.000	HS
	Study	1.70	.295				
Tenth Domain: Nurses' knowledge about hormonal and immunological treatment of ovarian cancer:	Control	1.18	.319	6.88	70	.000	HS
	Study	1.72	.367				
The eleventh axis: the nurses' knowledge about the follow-up of an ovarian cancer patient:	Control	1.09	.171	11.96	70	.000	HS
	Study	1.73	.260				
Twelfth Domain: Nurses' knowledge about palliative care for ovarian cancer patients:	Control	1.10	.174	10.16	70	.000	HS
	Study	1.69	.312				
Thirteenth Domain: Nurses' knowledge of ovarian cancer prevention methods:	Control	1.18	.217	10.21	70	.000	HS
	Study	1.77	.273				
The fourteenth Domain: Nursing care for an ovarian cancer patient:	Control	1.22	.217	9.97	70	.000	HS
	Study	1.74	.211				

M: mean of score , SD: standard deviation for total score, Sig: significance , Ass. : assessment ,NS: no Significant, df: degree of freedom, P: probability value HS: high significant, L=low level (1-1.33) ,M=moderate level (1.34-1.66), H=high level (1.67-2).NS: no Significant, HS: high significant .

This table shows comparison the knowledge of two groups (control and study) at posttest period shows high significance in all domains.

DISCUSSION

The analysis of Nurses of control group socio-demographic characteristics depicts that the majority of the nurses of control group were the majority of them within the age (20-less than 30) years old was (47.2%) and (20-less than 30) of the study group (52.8%). As shown in table (1).

halve of sample was married of control group was(50%) and about (63.9%) were married for the study group, and about highest proportion of educational level was with in the Nursing high school graduate for both control and study group was (47.2%).

While a t-test was used to assess the knowledge, awareness, and counseling skills of Korean healthcare practitioners for patients at high risk of OC. Others include Jihyoun Lee (2013). They discovered that there Demographic characteristics 25(5.8) was female age 30-39 was 27(81.8) had undergone prior genetic counseling education for nurses about ovarian cancer.

Concerning the nurses level of education the largest percentage are for nursing high school graduate ,most of the prefer a government job rather than improving their academic achievement and did not have the opportunity to continue their education .

The finding in table (2) indicated that in the control group, 44.4% from Oncology teaching hospital,41.7% from Baghdad teaching hospital,13.9 %from al-yarmok teaching hospital, 61.1% participated in training session for 5 days inside Iraq, 33.3% participated in 4-7 training session, 47.2% have (1-less than 6) years of service in nursing and 50% of them have health personal as source of information. In the study group, 44.4% from Baghdad teaching hospital,27.8% from oncology teaching hospital, 27.8%from al-yarmok teaching hospital, 44.4% participated in training session for 5 days inside Iraq, 22.2% participated in 1-3 training session, 58.3% have (1-less than 6) years of service in nursing and 69.4% of them have health personal as source of information.

The results revealed that the majority of the nurses in control group participate with training courses inside Iraq related with oncology nursing more than the study group but the years of experience between the study group was more

M. Stead, In 2003, 27 nurses were questioned. A total of 25 ladies, ranging in age from 22 to 52, were questioned at St James's University Hospital, Leeds General Infirmary, or Cookridge Hospital in Leeds. Six nurses worked in gynecological oncology (all on a ward), six worked in general gynecology (all on a ward), and 14 worked in medical oncology (six staff nurses/sisters, four chemotherapy nurses, and four outpatient nurses). One nurse was a Macmillan nurse and the other was a research nurse in medical oncology.

Concerning the most source of information about ovarian cancer was from the health personal and thus indicates to that most of them left updating their knowledge and practice through books or internet data .

In (3) table the finding indicated that the nurses in control group have low level of knowledge in the posttest for all domains and overall knowledge as shown in figure(1). Also, In the same figure shows that nurses in study group have low level of knowledge at pretest. While they have high level of knowledge in all domain at posttest. Also, there is highly significant deference between the pretest and posttest.

This findings provides empirical evidence that these nurses are best candidate for the educational program because they had poor knowledge at pretest and their knowledge improved after execution of the educational program about ovarian cancer that increasing in its dangerous rates according to the records of ministry of health 2012.

Thirty-five nurses were recruited and educated in Seoul, Korea, according to Kyung-Sook and others (2010). 'Knowledge about ovarian cancer' and 'knowledge about cancer genetics' were utilized as measurement tools. Students' understanding of OC was 12.222.23 during pre-education and increased to 13.621.76 after education, according to the results. The difference (t=-3.253, p=.003) was statistically significant.

According to Memnun Seven and colleagues (2017), the average degree of knowledge in oncology genetics was 6.74 3.85. The majority of nurses (78.7%) were aware that ovarian cancer runs in families; however, only 25.5 percent were aware that BRCA1 mutations in women can be passed on to their daughters. The majority of nurses (59.6%) said they would be willing to continue their education in cancer genomics

Results The majority of the 87 nurses who responded to Tuya Pal and others' research (2013) were community-based nurse practitioners, and the existence and type of cancer genetics training appeared to have a beneficial impact on responses. There were discovered knowledge gaps in BRCA prevalence estimations, as well as proper screening, testing, and findings analysis. The findings point to the need for stronger policy control and oversight of genetic testing services, and they are in line with case reports that show liability risks when genetic testing is performed without proper information and training for nurses caring for ovarian cancer patients.

Jihyoun Lee and colleagues (2013) found that if significant differences were found, the two groups were compared using analysis of covariance (ANCOVA), which took preprogram changes into account. Although participants' knowledge rose overall as a result of the education, there were no notable modifications or accomplishments in several subsections. As a result, using listed subsections of genetic counseling themes, gradual teaching should be organized. It is also necessary to develop a formalized core curriculum for genetic counseling.

The findings of the present study that the nurses level of knowledge is enhanced or improved to a good level of knowledge at posttest.

The point of view of the researcher related to the present study considers that the instructional program has effect on the level of knowledge.

The findings are in line with those of Jing Zhao and others (2021) The overall nursing satisfaction of patients in the observation group was significantly higher than that of patients in the control group (93.33 percent vs. 67.74 percent), with a statistically significant difference (P0.05), implying that health education via CNP (clinical nursing practice) could greatly enhance nursing fulfillment.

CONCLUSION

In light of the results ,the study concluded that the nurses working in the field that deals with ovarian cancer have insufficient knowledge about ovarian cancer . The program has effect on nurses level of knowledge and practice about ovarian cancer during the two period of test ,the study sample have low level of knowledge (pretest) implementation of educational program and the level of ascend to high level (posttest) implementation of educational program. There is significant deference between the mean of nurses knowledge and practice pre and post implementation of the program . There is significant deference between nurses knowledge at pretest and posttest period with place of working (hospital) for the study group .

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REFERENCES

1. Jihyoun, L.; Hyung J.C.; Han,W.Y.;Sue, K. P.; Jae J. Y.; Sung,W. K.; Eunyoung ,K., Sei,H.A.; Soo,J. L.; Young, J. S.; Sung ,Y. K.; Eun,K. K.; Nan, M. M., Min, H. L. (2013).The Effects of a Genetic Counseling Educational Program on Hereditary Breast Cancer for Korean Healthcare Providers. Journal of Breast Cancer.16(3),p.p. 335-341. DOI: https://doi.org/10.4048/jbc.2013.16.3.335.
2. Tuya ,P.;Deborah, C.;Courtney,L. ;Andrea ,D.; Maria ,R.; Cristi, R.; Zachary T.;Jongphil, K. and Susan T. V.(2013). A Statewide Survey of Practitioners to Assess Knowledge and Clinical Practices Regarding Hereditary Breast and Ovarian Cancer .17(5) .https://doi.org/10.1089/gtmb.2012.0381
3. Kyung, S. C.;Eun, S. J.; Myung,H.J.; Ji,Y.J.;Jung, A. P. (2010). The Effect of the Cancer Genetic Education Program for Nurses.Journal of Korean Oncology Nursing. 10(2),p.p. 240-246.
4. Stead, M.; Brown, J.; Fallowfield, L. P. S. (2003). Lack of communication between healthcare professionals and women with ovarian cancer about sexual issu. Br J Cancer. 88(5),p.p. 666-71.
5. doi: 10.1038/sj.bjc.6600799.
6. Jing,Z.; Guozhe,C.; Fangjie,Y.;Lizhuo,Xu.; Jie,Z., Yaoping W. and Cuiying, L. , (2021). Analysis of the change of clinical nursing pathway in health education among patients with ovarian carcinoma .Am J Transl Res , 13(4), p.p. 3138–3146.
7. Bi, F., Chen, Y. & Yang, Q. (2020). Significance of tumor mutation burden combined with immune infiltrates in the progression and prognosis of ovarian cancer. Cancer Cell Int ,20, No.373. https://doi.org/10.1186/s12935-020-01472-9
8. Epage, C.C.; Palmer, M.C.L.; Farrell, A.C. ; Nicole, M. N.; Zelda, L.; Mark, W. N. & Kirk, J. M.(2021). Reduced SKP1 and CUL1 expression underlies increases in Cyclin E1 and chromosome instability in cellular precursors of high-grade serous ovarian cancer. Br J Cancer ,124, p.p.1699–1710 https://doi.org/10.1038/s41416-021-01317-w.
9. Lanyu, L. ;Cheng, Q. ;Min, H.;Xinyu, W.; Changzhen, H. Jialin, Z.; Tianyi, L. J.Q..(2021) .Ferroptosis in Ovarian Cancer: A Novel Therapeutic Strategy . Frontiers in Oncology, 11, p.p.1364. https://doi.org/10.3389/fonc.2021.665945
10. Miller, K.; Rebecca, L. S.; Chun, C. L.; Mariotto, A. B. ; Joan, L. K. ;Julia, H. R.; Kevin, D. S. ; Rick, A. M.;Ahmedin, J.D.)2016(.Cancer treatment and survivorship statistics, 2016. CA Cancer J Clin, 66(4),p.p.271–289.
11. Memnun, S.; S Inciser, P.; Gulten, G. and Gulsah, K. .(2017). Knowledge Level and Educational Needs of Turkish Oncology Nurses Regarding the Genetics of Hereditary Breast and Ovarian Cancer.J Contin Educ Nurs, 48(12),p.p. 570-576. doi: 10.3928/00220124-20171115-09.
12. Gordon, C.; Elise, C.; Henry, C.; Jonathan, A .(2014). Ovarian cancer , 384 (9951), p.p. 1376-1388. https://doi.org/10.1016/S0140-6736(13)62146-7
13. Meridith, B.(2018). Self-responsibility, fatality, and heroism: a discourse analysis of ovarian cancer in women's magazines .27(2),p.p.168-183.