

Effectiveness of an Educational Program on Nurses Knowledge towards Nutrition of Oncologic Patients

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Abstract

Introduction: Cancer is a serious health issue in Iraq, where it is the second largest causes of death, according to Ministry of Health data from 2016. Cancer is among the primary causes of mortality and morbidity, in 2018, 9.6 million people died, or one per six death. Lung, colorectal, stomach, prostate, and cancer of liver affect males, whereas cervical, colorectal, breast, lung, and thyroid cancer affect women. (Jassim & Muhebes, 2021). **Objectives:** to assess the Nurses Knowledge toward nutritional instructions need for patients with Cancer at oncology center in AL-Diwaniyah. Governorate. And To Find out the Association Between Certain demographical data and Participation in Training Course with Oncology Nurses' Knowledge. **Methodology:** A quasi experimental study design is conducted at AL-Diwaniyah Specialized Oncology Center, from 17th March 2021 to 15th May 2022. For the aim of the study, the researcher created the program and instrument. A non-probability purposive sampling had been consisted of (60) oncologic nurses have been chosen to obtained represent and accurate data. The sample size is (60) nurses, split into two groups, one of which includes of (30) nurses as the study group and the other of which consists of (30) nurses as the control groups. The study groups taking the educational programs that deals with nutrition of oncologic cancer patients, the control group, on the other hand, has not been subjected to the instructional programs. To obtain data from study participant, the researcher built the tools consisted of two parts: First part is the socio-demographic variables and second part the knowledge of the nurses (knowledge related to nutrition of oncologic patients The study instrument's validity was verified by presenting it to (19) experts, and its reliability was assessed using the internal consistency approach. To determine the difference between the study and the control groups, descriptive analysis and analytical inferential analysis were performed. The study's result revealed that there is very significant difference in between study group's (pretest and posttests) in terms of (nurse's knowledge of nutrition of oncologic patient people with cancer), (MEAN \pm SD= 2.37 \pm 0.451) comparing to the pretest score (MEAN \pm SD=1.58 \pm 0.402) due to effectiveness of an educational programs. **Conclusion:** the study finds that an education program focusing on food for oncologic patient cancer patient has a high chance of success of treatment. **Recommended:** To establish nutritionist nursing specialty in our country similar to other developed countries to maintain our community health. Establishing one year diploma post graduate nursing studies for academic nurses in our nursing colleges to strengthen the nursing profession in these field. And specialized training sessions for nurses with exams to gain advantage and have an influence on the knowledge of oncology nurses, and oncology nurses must have particular pre-oncology educational courses before participating in the cancer ward..

Keywords: Nutritional, Instructions, Cancer

1. Introduction

Cancer kills over 70% of people in low- and middle-income nations. The five most prevalent behavioral and dietary hazards include a high BMI, a low fruits and vegetable consumption, a lack of physical activity, the use of cigarettes, and the use of alcohol, which account for around a third of cancer deaths. Through avoiding risk factors and applying existing evidence-based preventative techniques, 30–50 percent of malignancies may now be avoided (MOH, 2020). Cancer is a serious health issue in Iraq, where it is the second largest causes of death, according to Ministry of Health data from 2016. Cancer is among the primary causes of mortality and morbidity. in 2018, 9.6 million people died, or one per six deaths. Lung, colorectal, stomach, prostate, and cancer of liver affect males, whereas cervical, colorectal,

breast, lung, and thyroid cancer affect women (Jassim & Muhebes, 2021).

Cancer is a broad category of diseases that can start in almost any organ or portion of the human and spread throughout the body when aberrant cells multiply uncontrollably, invade neighboring body regions, and/or migrate to other organs. The latter is referred to as metastasizing, and it is a major cause of cancer-related death. Cancer is also known as a malignant tumor or a neoplasm (Awad & Mohammed, 2016). Food and nutrition, according to Maslow's hierarchy of needs, are on par with air in terms of fundamental survival demands. Without nourishment, death will inevitably ensue. Food, unlike oxygen, does so much more than just keep us alive. Personal, societal, and cultural connotations abound in food, defining our eating values, beliefs,

and practices. That meal satisfies (Haskins et al.,2020).

Malnutrition is the first sign of the presence of this disease. Cancer chemotherapy has an important influence on the patient's nutritional and health status due to its side effects. Malnutrition is detrimental to cancer patients especially patients treated with chemotherapy (Lis et al.,2012). Malnutrition reduces the quality of life, decreases the patient's functional activities, increases the rate of complications, prolongs hospital stays, and increases the risk of death. Therefore, early assessment of nutritional status and appropriate nutritional interventions in cancer patients could improve their nutritional status, help patients maintain their weight and respond better to treatment, and improve their quality of life (Thi & Nguyen, 2019).

2. Methodology

A quasi-experimental study design is conducted at Al-Diwaniyah Specialized Oncology Center, from 17th March 2021 to 15th May 2022. For the aim of the study, the researcher created the program and instrument. A non-probability purposive sampling had been consisted of (60) oncologic nurses have been chosen to obtained represent and accurate data. The sample size is (60) nurses, split into two groups, one of which includes of (30) nurses as the study group and the other of which consists of (30) nurses as the control groups. The study groups taking the educational programs that deals with nutrition of oncologic patients the control group, on the other hand, has not been subjected to the instructional programs. To obtain data from study participant, the researcher built the tools consisted of two parts: First part is the socio-demographic variables and second part the knowledge of the nurses (knowledge related to nutrition of oncologic patients). The study instrument's validity was verified by presenting it to (19) experts and its reliability were assessed using the internal consistency approach. To determine the difference between the study and the

control groups, descriptive analysis and analytical inferential analysis were performed.

Results

Table 1: findings show participants age, the mean age for nurses in study group is 25, the age 20-29 years old were recorded the highest percentage among nurses in study group (n=25; 83.3%). While, the mean age for nurses in control group is 28, the age 20-29 years old were recorded the highest percentage among nurses in control group (n=19; 63.3%). There were no-significant differences in age groups for nurses in both groups (p=0.130). Respect to the gender, the female was predominated among nurses in study group (n=20; 66%), compared with male among nurses in control group (n=18; 60%). There were significant differences in gender for nurses both groups (p=0.039). Gender related findings, the urban residents were predominated among nurses in both groups study-control (n=23; 76.7%) and (n=18; 60%) respectively. There were no-significant differences in residents for nurses both (p<0.171). In regard with education level, most of nurses were diploma graduated in study group (n=13; 43.3%). While, most of nurses in control group were distributed a diploma and college of nursing graduated (n=10; 33.3%) for both. There no-significant differences in educational level for both groups (p<0.757). Concerning years of experience, nurses in study and control groups expressed a less than 5 years of experience (n=25; 83.3%) and (n=18; 60%) respectively. There no-significant differences in years of experience of nurses for both groups (p<0.360). Years of experience in oncology unit, nurses expressed a less than 5 years of experience in oncology unit (n=29; 96.7%) and (n=21; 70%) respectively. There no-significant differences in years of experience of nurses for both groups (p<0.061). Nurses in study and control groups expressed no attended training sessions in oncology unit (n=19; 63.3%) and (n=17; 56.7%). There no-significant differences in training sessions of nurses for both groups (p<0.480).

Table 1: Descriptive Statistic of Socio-Demographic Variables (SDVs) of the Study-Control Groups

	Classification	Study		Control		p-value
		Freq.	%	Freq.	%	
Age /years	20-29 years old	25	83.3	19	63.3	0.130
	30-39 years old	3	10.0	5	16.7	
	40-49 years old	1	3.3	6	20.0	
	50 and older	1	3.3	0	0.0	
	Mean ± SD	25 ± 7.694		28 ± 7.672		
Gender	Male	10	33.3	18	60.0	0.039
	Female	20	66.7	12	40.0	
Residents	Rural	7	23.3	12	40.0	0.171
	Urban	23	76.7	18	60.0	
Education level	Nursing graduate	0	0.0	1	3.3	0.757
	Nursing High School	8	26.7	9	30.0	
	Diploma Degree	13	43.3	10	33.3	
	College of Nursing	9	30.0	10	33.3	
Years of experience	<5 years	25	83.3	18	60.0	0.360
	5-10 years	3	10.0	5	16.7	
	>10 years	2	6.7	7	23.3	
Experience in oncology	<5 years	29	96.7	21	70.0	0.061
	5-10 years	1	3.3	8	26.7	
	>10 years	0	0.0	1	3.3	
Training sessions	No	19	63.3	17	56.7	0.480
	One session	8	26.7	8	26.7	
	More than once	3	10.0	5	16.7	

Table 2: Mean Difference between the Study and Control Group responses at pre-posttest Knowledge related to Nutrition of Oncology Patients

Pre-test	Weighted	Mean	S. D	t-value	d.f	p≤ 0.05	Sig
	Study		1.58				
	Control	1.43	0.372	1.498	58	0.140	NS
Post-test	Study	2.37	0.451	7.295	58	0.000	HS
	Control	1.54	0.426				

M: Mean, SD: Standard deviation, t: t-test, d.f: Degree of freedom, Sig: Significance, p: Probability value, HS: NS: No significant, highly significant

This table shows that there is a no statistically significant difference between study ($M \pm SD = 1.58 \pm 0.402$) and control ($M \pm SD = 1.43 \pm 0.372$) groups in the pre-test period of measurement ($p = 0.140$). While there is a highly statistically significant difference between the study ($M \pm SD = 2.37 \pm 0.451$) and control ($M \pm SD = 1.54 \pm 0.426$) groups at the post-test period of measurement ($p = 0.000$). With respect to the statistical mean, the study results indicate that there is an improvement in the study group responses after the application of the program compared with the control group.

3. Discussion

Table (1) shows participants' ages; the means of age of nurses in the study groups is (Mean SD 25 7.694), with ages 20-29 years old accounting for the biggest proportion ($n = 25$; 83.3 percent). While the means of age of the nurses in the control groups is (Mean SD 28.672), the age group 20-29 years old has the largest proportion of nurses ($n = 19$; 63.3 percent). In both groups, there were no significantly different in age categories for nurses ($p = 0.130$). This absence of a significant difference means that the sample is homogeneous between the two groups, because most of them graduated with diplomas, so we find them from the youth group. These findings come with a study conducted in Jordan by Sharour, (2019), the mean age for participants is 29.5 and the ages group who 20-30 years old were records the majority.

Regarding to gender, female nurses largely dominated in the study group ($n = 20$; 66 percent), whereas male nurses heavily dominated in the control group ($n = 18$; 60 percent). Both group of nurses had significantly gender disparities ($p = 0.039$). These findings come consisting with Al Kalaldehy & Shahein, (2014) who find in their participants the female nurse were more than male. Concerning to residency, the highest percentage of the study sample is living in urban resident were predominated among nurses in each group study-control ($n = 23$; 76.7%) and ($n = 18$; 60%) respectively. There were no-significantly different in residents for nurses both ($p < 0.171$). These findings comes consisting with (Ismael & Baiee, 2020) in their 2018 Revision of World Urbanization Prospects, they discovered that 55 percent of the world's population lives in cities, with that percentage predicted to rise to 68 percent by 2050.

In regard with education level, most of nurses were diploma graduated in study group ($n = 13$; 43.3%). While, most of nurses in control group were

distributed a diploma and college of nursing graduated ($n = 10$; 33.3%). These finding agree with Theilla et.al (2016) who Assessment, Knowledge and Perceived quality of nutrition care amongst findings showed a diploma degree (50%) as their nursing qualification and 29% had a nursing collage.

Concerning years of experience, nurses in study and control groups expressed < 5 year of experience ($n = 25$; 83.3%) and ($n = 18$; 60%) correspondingly. Years of experience in oncology unit, nurses expressed a less than 5 years of experience in oncology unit ($n = 29$; 96.7%) and ($n = 21$; 70%) correspondingly. These finding come consisting with a study conducted in Iraq by (Ahmed & suad, 2018). The result of the study was (66.7%) in study group, (63.3%) in control group have (5) years of working in oncology wards, this may interpret that most of oncology nursing staff are new and younger employees with low experiences.

Unfortunately, Nurses in study and control groups expressed no attended training sessions in oncology unit ($n = 19$; 63.3%) and ($n = 17$; 56.7%). this result reveals the need of continuous education regarding nursing nutritional instructions for patients with Cancer. finding consistent come with Al Kalaldehy & Shahein (2014), the majority (82.3%) of nurses were no attending any training session because hospital policy does not care about this aspect.

Table (2) nurses' knowledge towards nutrition of oncology patients at pretest for each group (study and control) At the pretest phase of assessment for both research groups, nurses acknowledged a low knowledge level about diet of oncologic patient, according to the present study results (MEAN \pm SD=57.06 \pm 14.500) and control group (Mean \pm SD=51.66 \pm 13.399). The foregoing present study findings are in agreement with previous studies, which reported similarly low levels of nurses' knowledge about nutrition of oncologic patients. Thus, merel et.al (2017), demonstrated in their findings a generally nurses expressed a deficient knowledge, with less than two-fifth of the nurses having total satisfactory knowledge about nutrition of oncologic patients.

Table (2) nurses' knowledge towards nutrition of oncology patients at post- test for each group (study and control) the posttest phase of assessment, nurses in the present research indicated a high degree of knowledge about nutrition for cancer patient (MEAN \pm SD=85.33 \pm 16.261) after application of education programs. At the posttest time of assessment, nurses in the control group had a low knowledge level (M SD=55.53 15.368). This

data indicates that the teaching program was successful, since nurses in the research group indicated satisfaction. Attending standard training programs on nursing knowledge about nutrition had positive effects. This finding is comparable with the finding of the studies conducted in America United States (Malone, 2015), Jordin (Al Kalaldehy & Shahein, 2014) and Egypt (Morsy et al. 2014).

4. Conclusion

The study finds that an education programmer focusing on food for oncologic patient cancer patient has a high chance of success.

5. Recommended

To establish nutritionist nursing specialty in our country similar to other developed countries to maintain our community health. Establishing one year diploma post graduate nursing studies for academic nurses in our nursing colleges to strengthen the nursing profession in this field. And specialized training sessions for nurses with exams to gain advantage and have an influence on the knowledge of oncology nurses, and oncology nurses must have particular pre-oncology educational courses before participating in the cancer ward.

References

- Al-Musawi, I. H. J., & Baiee, H. A. (2020). Prevalance of Vitamin D deficiency and it' s
- Al Kalaldehy, M., & Shahein, M. (2014). Nurses' knowledge and responsibility toward nutritional assessment for patients in intensive care units. *Journal of Health Sciences*, 4(2), 90-96.
- Al Kalaldehy, M., & Shahein, M. (2014). Nurses' knowledge and responsibility toward nutritional assessment for patients in intensive care units. *Journal of Health Sciences*, 4(2), 90-96.
- Al Kalaldehy, M., & Shahein, M. (2014). Nurses' knowledge and responsibility toward nutritional assessment for patients in intensive care units. *Journal of Health Sciences*, 4(2), 90-96.
- Salwa, A., Hassan, A., & Othman, A. (2016). Assessment of Cancer Patient Undergoing Chemotherapy Knowledge Regarding Home Self Care in Tumor Therapy and Cancer Research Center Shendi 2016 (Doctoral dissertation, Shendi unveracity).
- Haskins, C. P., Champ, C. E., Miller, R., & Vyfhuis, M. A. (2020). Nutrition in cancer: evidence and equality. *Advances in Radiation Oncology*, 5(5), 817-823. <https://doi.org/10.1016/j.adro.2020.05.008>
- Tweely, I. S., & Mhammad, S. G. (2018). Effectiveness of an Education Program on Heart Failure Patients Knowledge Concerning Self-Care in Baghdad Teaching Hospitals. *Indian Journal of Public Health Research & Development*, 9(8).
- Jassim, G. N., & Muhebes, F. J. (2021). Assessment the Risk Factors of Breast Cancer and the Chemotherapy Complications in Women Attending

- Al- Diwanayah Tumors Center. University of Babylon College of Nursing.
- Lis, C. G., Gupta, D., Lammersfeld, C. A., Markman, M., & Vashi, P. G. (2012). Role of nutritional status in predicting quality of life outcomes in cancer—a systematic review of the epidemiological literature. *Nutrition journal*, 11(1), p.p.1–18.
- Sharour, L. A. (2019). Improving oncology nurses' knowledge, self-confidence, and self-efficacy in nutritional assessment and counseling for patients with cancer: A quasi-experimental design. *Nutrition*, 62, 131–134. <https://doi.org/10.1016/j.nut.2018.12.004>
- Theilla, M., Cohen, J., Singer, P., Liebman, C., & Kagan, I. (2016). Journal of Nutritional Medicine and Diet Care The Assessment, Knowledge and Perceived Quality of Nutrition Care amongst Nurses. *J Nutri Med Diet Care*, 2(1), 12.
- Thi, V., & Nguyen, H. (2019). The Relationship Between Nutritional Status and the Quality of The Relationship Between Nutritional Status and the Quality of Life for Gastric Cancer Patients. <https://digscholarship.unco.edu/theses>
- Van Veen, M. R., Hoedjes, M., Versteegen, J. J., Van De Meulengraaf-Wilhelm, N., Kampman, E., & Beijer, S. (2017). Improving oncology nurses' knowledge about nutrition and physical activity for cancer survivors. *Oncology Nursing Forum*, 44(4), 488–496. <https://doi.org/10.1188/17.ONF.488-496>