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**QUALITY OF LIFE AND RELATED FACTORS OF
FEMALE PATIENTS WITH GYNECOLOGIC
CANCER AND EFFECTIVENESS OF OF
INTERVENTION IN K NATIONAL HOSPITAL**

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- National library

- Hai Phong University of Medicine and Pharmacy library

**LIST OF RESEARCH RELATED TO THE DISSERTATION HAS
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1. **Nguyen Xuan Thanh**, Nguyen Thi Lua, Nguyen Van Khai, Pham Minh Khue, Nguyen The Anh (2022), "Quality of life of female patients with gynecologic cancer at the K National hospital in 2020 - 2021". *Journal of Preventive Medicine*, Volume 32, No. 1 – 2022, p. 139-141
2. **Nguyen Xuan Thanh**, Nguyen Thi Lua, Nguyen Van Khai, Pham Minh Khue (2021), "Characteristics of functional areas and quality of life of female patients with gynecologic cancer at the K national hospital in 2020-2021". *Vietnam Journal of Oncology*, No. 1 - 2022, p. 295-298.
3. **Nguyen Xuan Thanh**, Nguyen Thi Lua, Nguyen Van Khai, Pham Minh Khue (2022), " Evaluation of the effectiveness of psychological interventions to improve the quality of life of female genital cancer patients at K national hospital". *Vietnam Medical Journal*, Vol. 515 (Special edition – 2022), p. 378-385.

1. Introduction

Gynecologic cancer in women is a common disease that occurs when there is the appearance of malignant tumors in the female genital organs such as: cervix, ovaries, endometrium, vulva, vagina. Gynecologic cancer in women is caused by many factors such as genetic factors, lifestyle, and diet. In addition to serious life-related consequences, female patients with gynecologic cancer also suffer serious effects on quality of life such as fatigue, insomnia, biological dysfunction of the body and serious effects on the quality of life. Important factors related to reproductive and sexual functions are major obstacles to a woman's vocation as a wife and mother. The outcomes of disease treatment are not only considered from a purely medical perspective, but also from a psychological, social, and economic perspective related to quality of life. The World Health Organization has defined "health-related quality of life" as the effects of an individual's illness, disease or health disorder on an individual's comfort and ability to enjoy life. of that individual.

In Vietnam, there have been no published studies on the status of QOL of female patients with gynecologic cancer as well as the implementation of psychological interventions to improve QOL systematically for these patients. So, what is the QOL status of Gynecologic cancer patients being treated at a hospital in Vietnam? What are the factors affecting the QOL of female patients with gynecologic cancer? Will the outcome of interventions on Gynecologic cancer patients improve their QOL? The effectiveness of the intervention is proven not only to help improve the quality of life of female patients with gynecologic cancer, but also to help the care system have policies, improve the organization, and improve service quality. With those questions, we carry out the research topic **“Quality of life and related factors of female patients with gynecologic cancer and effectiveness of of intervention in K national hospital”** with the following three objectives:

1. Describe the status of quality of life of female patients with gynecologic cancer at K Hospital, 2020.
2. Determining factors related to the quality of life of the above research subjects
3. Evaluating the effectiveness of psychological interventions to improve the quality of life and stress of female patients with

gynecologic cancer at K Hospital in 2021.

2. The new contributions of the dissertation:

(1) The research provides the current status of the quality of life of female patients with gynecologic cancer at K Hospital, thereby providing the basis for providing intervention solutions to improve the patient's quality of life of female patient with gynecologic cancer. (2). Research results are good evidence to make recommendations by psychological interventions for female patients with gynecologic cancer, as well as improve the quality of treatment and healthcare for cancer patient in the hospital. From therrit is the basis for replicating this model of psychological intervention to other intervention areas, to help improve knowledge and skills in psychological counseling to improve patients' quality of life in the treatment of health workers.

3. Structure of the dissertation

The main part of the dissertation has 130 pages, consisting of the following sections:

Introduction: 2 pages; Chapter 1- Overview: 38 pages; Chapter 2 - Materials and Methods: 22 pages; Chapter 3 - Results: 39 pages; Chapter 4 - Discussion: 26 pages Conclusions and recommendations: 3 pages

The dissertation has 177 references, 37 tables and 6 figures. There are totally 10 appendices of 45 pages.

Chapter 1 : OVERVIEW

1.1. Summary of some studies on the quality of life of patients with gynecologic cancer in the world and in Vietnam

1.1.1. In the world

Research on QOL of female patients with gynecologic cancer has been conducted in several countries around the world to compare treatment methods and evaluate the effectiveness of treatment as well as the effect of treatment on female patients with gynecologic cancer.

According to a study by Hediya Putri R in 2018, conducted on 153 patients, the author used the EORTC-QLQ 30 toolkit to assess the overall quality of life and the EORTC-QLQ-CX 24 questionnaire to assess the overall quality of life. Evaluation of the quality of life of patients with cervical and ovarian cancer. Results obtained: up to 96.1% of patients received care support; Care needs but not yet found support depend on the medical service and the stage at which the disease was discovered.

1.1.2. In Vietnam

In Vietnam, there are a number of research projects on QOL that have been carried out for cancer patients in general and each cancer in particular.

The study carried out a QOL survey on patients with early stage breast cancer who were treated by Cung Thi Tuyet Anh and colleagues. The survey subjects were 130 breast cancer patients and 130 women of the same age without cancer. QOL was surveyed by the QLQ-C30 and the QLQ-Br23 breast cancer patient questionnaire. The mean QOL scores were generally similar between the 2 groups (76 ± 3.3 and 76.1 ± 3.3). Research shows that the pathological factor adversely affects QOL. Predictable factors: systemic symptoms (44%), chemotherapy, emotional and occupational. According to a study by Nguyen Thi Thanh Phuong on QOL assessment of stage 4 cancer patients before and after treatment The Pain Department - Hanoi Oncology Hospital in 2013 also used the QLQ-C30 Toolkit version 3.0. Research results have shown the relationship between cancer location and overall health score... Especially to improve QOL, it is necessary to have a comprehensive treatment and care regimen both physically and mentally. god for the sick. The author recommends that the QLQ-C30 questionnaire will help health workers comprehensively assess the patient's condition.

1.2. Synthesis of psychological intervention studies in the world and in Vietnam

1.2.1. In the world

The results discussed on the intervention report to improve women's quality of life GYNECOLOGIC CANCER addressed aspects of the patients' physical, psychological, social, emotional and sexual health.

According to Molassiotis, the theoretical framework developed for cancer patients, psychological functioning, physical health, sexuality, environment, social functioning and individual aspects are very important in the adaptation process of the patient. Cancer patients and the interventions performed for these aspects are more likely to improve quality of life. To improve the patient's quality of life, physicians and healthcare facilities should also consider the long-term consequences that persist after diagnosis and treatment such as pain, fatigue, sexual problems, anxiety. on body image and psychological dysfunction of patients. Gonzalez et al studied to conduct a randomized psychological intervention for patients with gynecologic cancer during 18 months since the diagnosis of gynecologic cancer in order to improve QOL for patients; Results: Patients who received psychological

counseling improved scores on mood, quality of life, and physical function over the course of 18 months; in contrast, in the group of patients who were not consulted, up to 12% of patients suffered from prolonged depression and reduced quality of life; This difference is statistically significant with $p < 0.05$.

1.2.2. In Vietnam

In Vietnam, strategies to improve the QOL of female patients with gynecologic cancer depend on many factors such as conditions of medical facilities, the interest of management levels, support from family side. Research by Bui Vu Binh shows that the level of culture, stage of disease, duration of disease and treatment methods affect QOL, so counseling on treatment methods is appropriate to the ability and desire of the patient. human, partly to help improve QOL during treatment.

Chapter 2. METHODOLOGY

2.1. Sample size and sampling method

Sample size:

Descriptive primary study: The sample size for the study was calculated using the formula for calculating the sample size for a single-valued population mean study:

$$n = Z^2_{(1-\alpha/2)} \times \frac{\sigma^2}{\varepsilon^2 \mu^2}$$

The total number of subjects who participated in the study at the initial investigation stage (before the intervention) was 700 subjects

Intervention study: Applying the formula to calculate sample size 2 mean values for the intervention group

$$n = 2\sigma^2 \frac{(Z_{1-\alpha/2} + Z_{1-\beta})^2}{(\mu_1 - \mu_2)^2}$$

The intervention sample size is $n = 322$. The total number of subjects participating in the study at the post-intervention stage is 350 subjects.

Sampling method

Sampling by simple randomization based on the list of female patients treated for gynecologic cancer at K Hospital 3 - Tan Trieu.

2.2. Variables and indicators of the study

Cross-sectional study

Group of variables on quality of life and variables on factors related to quality of life of patients.

Intervention study

Variables related to the effectiveness of the intervention, the change in quality of life before and after the intervention. The efficiency index was related to the patient's stress indicator.

2.3. Data collection tools and techniques

2.3.1. Data collection tools

Quantitative interview questionnaire

2.3.2. Data collection process:

Step 1: Build, test and perfect research tools. Step 2: Training on research tools. Step 3: Conduct the survey: the research subjects (researchers) were interviewed using a set of questions. Step 4: Supervising the data collection progress.

2.3.2. Standards and how to evaluate indicators in research

+) Quality of life scale and rating

- Raw Score (RS) = $(Q1 + Q2 + \dots + Qn)/n$

- Normalized score: raw score is calculated on a scale of 100 (according to the formula)

Functional Area Score: $\text{Score} = [1 - (RS - 1)/3] \times 100$

Symptom area score: $\text{Score} = [(RS - 1)/3] \times 100$

Overall Health Score: $\text{Score} = [(RS - 1)/6] \times 100$

+) Evaluating intervention effectiveness

Compare two proportions by chi2 test, two mean values by paired t test, Wilcoxon test. The effectiveness of the intervention is a stress indicator calculated by the formula $(EI) = |P_{\text{after intervention}} - P_{\text{before intervention}}| / P_{\text{before intervention}} \times 100$. In which, EI is the efficiency index.

2.4. Psychological interventions

The psychological intervention program is organized into 35 classes. Six to ten women in a group participated in each meeting held at the hospital or online consultation for 1 month. At sessions 2 and 3 (Cancer causes and effects of treatment), team members received information from an oncology nurse, an oncologist, or an X-ray physician. optical. At session 5, a nutritionist provided information on diet, supplements, and more.

Thematic group counseling sessions include 8 study sessions per month for 6 months, 2 sessions per week (each session lasts 1 hour - 1.5 hours) as outlined in the model. After each group psychological counseling session both face-to-face and online, the study subjects will participate in Yoga

practice with direct or online guidance of movement and physical training teachers within the next 2 hours.

2.5. Data management and analysis

- + Use basic medical statistical algorithms: calculate mean, calculate percentage. Use the squared test (χ^2) to compare the differences between groups and the t-test and the mann-whitney test to compare between two means. Mc-nemar's squared (χ^2) test and wilcoxon's t-paired test to compare the difference between rates and mean values before and after the intervention.
- + Multivariate analysis model has selected variables when univariate analysis has statistical significance, variables have $p < 0.05$; literature variables have been published in textbooks and other studies.

2.6. Errors and remedies

2.7. Measures to limit errors are applied including standardization of questionnaires through trial surveys, staff participating in research surveys being uniformly trained in the use of information collection tools, and close monitoring. Close the investigation process to avoid errors. The information collection forms were thoroughly checked on site to ensure that the information collected was complete and consistent with the objectives of the study.

2.8. Đạo đức trong nghiên cứu

The study was approved by the scientific council of Hai Phong University of Medicine and Pharmacy to review and approve the research protocol to ensure the scientificity and feasibility of the topic.

Chapter 3: RESULTS

The main results of the thesis

The study results showed that before intervention, the quality of life of female patients with gynecologic cancer was on average 60.5 ± 19.2 . The main factors related to the patient's quality of life are age, occupation, and financial status. Besides, comorbidities and time of cancer detection also greatly affect the QOL of cancer patients. After psychological intervention, 350 female patients with gynecologic cancer had certain improvements in quality of life and personal stress.

3.2. Current status of patients' quality of life

3.2.1. Current status of QOL

Table 3.1: QOL score of female patients with gynecologic cancer

Characteristics	Mean ± SD	Correlation coefficient	p
QOL	60.5 ± 19.2	1	
Physical functioning	79 ± 20.2	0.806	<0.01
Role functioning	64.1 ± 30	0.822	<0.01
Emotional functioning	73 ± 22	0.772	<0.01
Cognitive functioning	75.1 ± 24.4	0.726	<0.01
Social functioning	63.4 ± 28.7	0.802	<0.01
Fatigue	33 ± 26.6	-0.807	<0.01
Nausea and vomiting	15.8 ± 19.2	-0.543	<0.01
Pain	21.3 ± 22.5	-0.693	<0.01
Dyspnoea	12 ± 21.5	-0.551	<0.01
Insomnia	29.2 ± 28	-0.611	<0.01
Appetite loss	29.2 ± 28.4	-0.615	<0.01
Constipation	14.9 ± 28.4	-0.173	<0.01
Diarrhea	14.3 ± 22	-0.343	<0.01
Financial difficulties	48.6 ± 28.6	-0.692	<0.01

Interpret:

The overall QOL score of the study participants was 60.5 ± 19.2. There was a positive relationship between the emotional and physical function domain scores and the overall quality of life score ($r= 0.806$ and $r= 0.772$; $p<0.01$), respectively. Meanwhile, there was an inverse relationship between the symptom domain scores such as fatigue, pain, insomnia, and anorexia compared with the overall QOL score (with $-1<r<0$; $p<0.01$).

3.2.2. Funcional

Table 3.2: Funcional scores according to individual characteristics of the subject

Characteristics	Functional scores (Mean \pm SD)				
	Physical functioning	Role functioning	Emotional functioning	Cognitive functioning	Social functioning
Tuổi					
<40	86.7 \pm 15.5	77.1 \pm 26.5	82.4 \pm 19.3	83.9 \pm 22.6	76.3 \pm 28.1
40-<50	85.2 \pm 19.3	74.7 \pm 29.2	80.3 \pm 20.8	81.5 \pm 23.5	74.5 \pm 28.3
50-<60	76.9 \pm 19.7	60.6 \pm 29.8	69.2 \pm 22.2	71.3 \pm 24.4	59.4 \pm 28.2
\geq 60	74 \pm 20.9	56.6 \pm 28.8	68.9 \pm 21.4	71.6 \pm 24	55.8 \pm 26.1
p-value	<0.01[†]	<0.01[†]	<0.01[†]	<0.01[†]	<0.01[†]
Nghề nghiệp:					
CBNV	91.3 \pm 13.1	82.5 \pm 24.1	83.5 \pm 19.5	87.3 \pm 19.3	80.5 \pm 25.7
CN. ND	78.6 \pm 19.1	64.8 \pm 29.2	72.7 \pm 22.5	73.5 \pm 25.1	63.2 \pm 28.2
Nghỉ hưu	77.4 \pm 19.1	59.8 \pm 27.9	72.3 \pm 20.5	73.6 \pm 22.5	58.1 \pm 26.5
Thất nghiệp	52 \pm 29.6	43.3 \pm 34.4	54.4 \pm 23.1	62.2 \pm 26.3	46.7 \pm 28.3
Khác	75.2 \pm 21.2	57.7 \pm 31.1	69 \pm 21.9	71.7 \pm 25.7	59.3 \pm 29
p-value	<0.01[†]	<0.01[†]	<0.01[†]	<0.01[†]	<0.01[†]
Học vấn:					
<THPT	74.1 \pm 22.3	57.7 \pm 31.1	69.2 \pm 22.8	72.2 \pm 25.8	57.7 \pm 28.4
THPT	79.1 \pm 18.5	63.1 \pm 29.1	73 \pm 20.9	75 \pm 23.1	61.9 \pm 27.4
>THPT	86.8 \pm 16.5	76.4 \pm 25.8	79.6 \pm 20.9	81.7 \pm 22.6	75.1 \pm 27.8
p-value	<0.01[†]	<0.01[†]	<0.01[†]	<0.01[†]	<0.01[†]

*Paired T-test

† Wilcoxon test

Interpret:

There is a statistically significant difference between age groups,

occupation and education level.

Table 3.11: Mean score of symptoms according to individual characteristics of the subject

Characteristics	Symptoms		p
	Mean	SD	
Age group			
<40	12.3	15.3	<0.01
40-<50	15.8	16.6	
50-<60	25.6	17.8	
≥60	28.0	17.4	
career			
Officers	11.0	15.4	<0.01
Worker/farmer	22.4	16.0	
Retirement	25.7	16.8	
Unemployment	42.6	23.9	
Other	26.1	19.0	
Education			
<High School	26.9	18.5	<0.01
High School	23.6	17.0	
>High School	14.4	16.6	

Interpret:

Symptom score increased gradually by age group, lowest in group under 40 years old 12.3; the highest in the group over 60 years old 28.0, the difference was statistically significant with $p < 0.05$. The highest symptom score in the unemployed group was 42.6; retirement 25.7; lowest in the

group of employees, the difference was statistically significant with $p < 0.05$. The symptom area scores gradually decreased by education level, the difference was statistically significant with $p < 0.05$.

3.2.4. Factors affecting the quality of life of female patients with gynecologic cancer

Multivariate regression analysis on some factors related to the patient's QOL: the results show that the patient's age is negatively related to the subject's overall QOL score with the correlation coefficients respectively - 0.41, $p < 0.05$. The results of this study also show that patients have an inverse relationship with the overall QOL score between occupational groups with the correlation coefficient CNND -10.27; retirement is - 12.69; unemployment -26.30 compared to employees, the difference is statistically significant ($p < 0.05$). Patients with high school education or higher have a higher quality of life score than the other groups, respectively, the group of high school subjects has a related coefficient of 3.24; above high school is 11.03 with $p < 0.05$.

The results of multivariable analysis of the relationship between factors with participation in traditional medicine training in health workers also show that the rate of participation in traditional medicine training among health workers of other ethnicities who attend continuous training is 0.30 times (95CI%: 0.1 - 0.8) compared to health workers who are from the Kinh ethnic group. Research results also show that the rate of participation in traditional medicine training among health workers who have never heard of continuing traditional training in traditional medicine is 0.13 times (95% CI: 0.05 - 0.32) compared with health workers. have heard about TLTLT. Contracted health workers who are continuously trained in traditional medicine are only 0.50 times (95% CI: 0.27 - 0.92) compared to regular medical staff. In addition, health workers who did not update their knowledge of traditional medicine regularly attended a traditional medicine class only 0.29 times (95% CI: 0.12 - 0.65) compared to health workers who updated their knowledge regularly.

Results of multivariate analysis of the relationship between disease status factors and overall quality of life. The positive relationship was statistically significant in patients with no comorbidities and patients with 2-3 courses of treatment compared with the less group, with QOL scores

compared with the group with disease with regression coefficients, respectively. regression 6.55 and regression coefficient 6.66 ($p < 0.05$). There is an inverse relationship in stage IV patients with QOL score compared to stage 1 patients with regression coefficient -20.58, $p < 0.05$. And similarly, the inverse relationship in patients diagnosed with cancer over 1 year with QOL score compared with stage 1 patients with regression coefficient -4.64, $p < 0.05$.

3.3. The change in QOL and stress indicator of GYNECOLOGIC CANCER patients before and after intervention

The mean score of quality of life increased significantly compared to before the intervention. The level increases from 4 times to 20 times. In addition, the effectiveness index related to the personal stress indicator also increased from 5% to 27%.

Table 3.18: QOL score (EORTC QLQ-C30 questionnaire)

Index	Before Intervention	After Intervention	t	p
	Mean \pm SD	Mean \pm SD		
<i>QOL</i>	60.8 \pm 18.4	72.7 \pm 16.5	-20.43	<0.001 *
<i>Funcional</i>				
Physical functioning	88.1 \pm 17	90.3 \pm 13.7	-7.86	<0.001 *
Role functioning	69 \pm 26.3	81 \pm 21	-14.51	<0.001 *
Emotional functioning	79 \pm 19.7	87.4 \pm 14	-13.18	<0.001 *
Cognitive functioning	72 \pm 26.3	83.8 \pm 18.9	-12.16	<0.001 *
Social functioning	64.3 \pm 28.3	73.8 \pm 24.6	-11.09	<0.001 *
<i>Symptoms</i>				
Fatigue	23.4 \pm 21	18.2 \pm 17.7	11.45	<0.001 *

Nausea and vomiting	35.4 ± 27.1	28.6 ± 23.6	8.97	<0.001 *
Pain	16 ± 19	14.8 ± 17.6	4.09	<0.001 ‡
Dyspnoea	29.7 ± 28.7	23 ± 26.7	7.63	<0.001 *
Insomnia	34.5 ± 31.4	24.2 ± 29.1	8.30	<0.001 ‡
Appetite loss	22 ± 25.4	26.5 ± 23.8	-4.63	>0.05
Constipation	32.1 ± 29.5	32.2 ± 25.1	-0.11	>0.05
Diarrhea	33.2 ± 30.2	30.6 ± 26.9	2.96	>0.05
Financial difficulties	48.9 ± 27.6	48.1 ± 28.3	1.05	>0.05

*Paired T-test

‡ Wilcoxon test

Interpret:

There is a statistically significant difference between QOL scores before and after the intervention (with $p < 0.001$, paired t-test). In which, the overall QOL score, and the functional domain mean score were higher after the intervention than before the intervention. Meanwhile, the mean scores in symptoms and financial difficulties after the intervention were lower than before the intervention. However, the difference in financial difficulties, diarrhea, constipation, anorexia was not statistically significant (with $p > 0.05$; paired t-test).

Table 3.31: Efficacy before and after psychological intervention for Female patients with gynecologic cancer

Index		Before Intervention		After Intervention		EI	p
		n	%	n	%		
Body	Achieved	261	74.6%	296	84.6%	13%	<0.01

indicator	Not achieved	89	25.4%	54	15.4%		
Sleep indicator	Achieved	186	53.1%	236	67.4%	27%	<0.01
	Not achieved	164	46.9%	114	32.6%		
Behavior indicator	Achieved	321	91.7%	338	96.6%	5%	<0.05
	Not achieved	29	8.3%	12	3.4%		
Emotion indicator	Achieved	219	62.6%	267	76.3%	22%	<0.01
	Not achieved	131	37.4%	83	23.7%		
Personal Habits	Achieved	307	87.7%	289	82.6%	-6%	<0.05
	Not achieved	43	12.3%	61	17.4%		

Interpret:

Body indicators, sleep, behavior and emotions of the study subjects improved after the intervention compared to before the intervention. Statistical significance level ($p < 0.05$; chi2 Mc Nemar). The highest intervention efficiency in sleep indicator, emotional indicator, body indicator, and CSHQ was 27%, 22%, 13% and 5%, respectively. However, the indicator of personal habits decreased compared to before the intervention (CSHQ= -6%).

Chapter 4: DISCUSSION

4.1. Analysis of QOL status of female patients GYNECOLOGIC CANCER

The research results show that the average QOL score of cancer patients in our study is 60.8 points, in which the functional field has a relatively high score, the highest is the functional area. physical activity 88.1 points and the lowest is social function 64.3 points. Meanwhile, the area of

symptoms and financial difficulty had a relatively low score, with the highest score being 48.9 points and the lowest score being 16.0 points for diarrhea symptoms. Research results show that the quality of life of patients being treated in the treatment department is relatively low. Meanwhile, the patient of the study at the Hanoi Oncology Hospital in 2013 was a stage 4 cancer patient and the patient in the study at the Ho Chi Minh City Oncology Hospital. HCMC is a patient experiencing pain due to advanced treatment. A number of studies in the world prove that the quality of life of cancer patients in the terminal stage or the stage of advanced treatment who have to experience pain and fatigue greatly affects the quality of life of the patient. However, the results of our study are still lower than the study of Cung Thi Tuyet Anh and colleagues conducted in 2013 on treated early stage patients, the average QOL score is generally similar between 2 patients. Intervention group was 76 ± 3.3 and 76.1 ± 3.3 , respectively.

Research shows that, all five functional areas are positively correlated with quality of life, as the functional domain scores increase, the quality of life scores increase. Score of physical function contributed the most to the quality of life of cancer patients ($r = 0.806$; $p < 0.01$). This result is also higher than the study of Safaee A in 2008 (57.31 points). The correlation of physical function was also shown to correlate with the quality of life of cancer patients after cognitive and emotional function. This correlation was strong in the group of patients who had difficulty with strenuous labor (42%) or vigorous activity such as walking for a long time (38%) mainly. This explains why the average physical score of the patient is relatively high.

The symptom domain and financial difficulty are inversely related to the quality of life of cancer patients, as the symptom scores and financial difficulties increase, the quality of life scores decrease and vice versa. The most significant contributors to the quality of life score were fatigue symptom scores ($r = -0.525$; $p < 0.01$), with other symptom domains and financial hardship having a smaller contribution to quality of life. patient's survival, except for symptoms of vomiting, constipation and diarrhea ($p > 0.05$). This result is consistent with the study of Vu Van Vu in 2010, fatigue and pain most affect the quality of cancer patients. This result is also consistent with the results of a 2016 study by Shamaila

Mohsin et al., which showed that fatigue, nausea, pain and anorexia were statistically significantly associated with the patient's quality of life score.

4.2. Related factors affecting QOL of cancer patients

+) *Demographic factors*

The QOL score did not differ for factors such as age, occupation, and education. An important component in assessing the effects of disease in general is the functional presentation of the patient. The perceived effects of illness by the patient will be an important criterion in assessing the impact of illness on the patient's health. The results of the analysis show that the average scores of physical, active, emotional, cognitive and social functions decrease with the increase of age. Meanwhile, symptom field scores increased with increasing age. There was a statistically significant difference between the mean scores in the physical, functional and cognitive domains between the younger group of patients (under 40 years of age) compared with the older group of patients. For cancer patients, the effects of the disease are the same for the patient, regardless of age and sex. However, the results of the study differed significantly from the results of other studies on the quality of life of cancer patients.

+) *Disease condition factor*

In this study, patients with cervical cancer accounted for 60.9% of the total number of patients participating in the study, followed by ovarian cancer (23.9%) and endometrial cancer. According to cancer statistics in Vietnam, cervical cancer and adnexal cancer also account for a high rate of all cancers in general.

The patients participating in the study have more than 43.7% are in stage 3, nearly 40% in stage 2, patients participating in the study at stage 4 are 14.1%, while there are only 2, 3% are in stage 1. Besides, the rate of cancer diagnosed at early stage in the study (< 6 months) reached 50.0% and from 6 months to 1 year accounted for 30%, lower than Research by author Nguyen Quynh Anh et al in 2015: the rate of cervical cancer in the early stage is 83.3%. Meanwhile, in a study by author Bui Dieu et al., the rate of patients with early stage accounted for only 39.6% of the total 3,955 breast cancer cases recorded at the stage from 2005 to 2008.

4.3. Effectiveness after 6 months of intervention

Quality of life indicators measure the impact of disease and its treatment on the domains of physical, functioning, emotional, cognitive, and social functioning. Quality of life indicators, which focus on the

patient's own perception of the disease, provide additional information that cannot be obtained from clinical and subclinical. Therefore, tools to measure quality of life have been published by various organizations for a comprehensive assessment of the health of treated patients.

Our study compared the QOL between treatment before and after psychological intervention in female patients with gynecologic cancer. The global health mean score showed a significant increase after the intervention as an indicator of the improvement in life after the intervention. Besides, the individual stress indicators also had a statistically significant increase after the intervention. Similar results were found in a recent study published by Kumar et al. 2014. In the functional domain, all domains showed significant increases after performing psychological interventions including physical, functioning, emotional, cognitive and sociosocial performance. This finding contrasts with a 2002 study by Greimel et al., which found that global health status, social and emotional functioning remained low. This difference may be due to their study covering all stages of cervical cancer and the fact that the majority of study subjects underwent surgery as part of their treatment modality. The symptom scale analysis showed that fatigue, pain, insomnia and loss of appetite after treatment were significantly reduced. This is in contrast to another study done by Klee et al in 2000, in which pain, anorexia, nausea and vomiting increased 3 months after the intervention.

Psychotherapy helps to soothe the psyche, soothe the body and alleviate the negative effects of symptoms; however, the majority of psychological interventions are performed only after cancer treatment. Newly diagnosed cancer patients often feel depressed while waiting for treatments. After 6 months of psychological intervention, we determined that the individual stress indicators of the study subjects increased significantly in most of the indicators including body indicators, sleep indicators, behavioral indicator, emotional indicator ($p < 0.05$). However, there is still a relatively small decrease in personal habits compared to the time before the intervention ($p < 0.05$).

Improved body mass index is an important factor contributing to improving the quality of life of cancer patients. In our study, the body

index of “Very High” and “Dangerous” after the intervention had a lower rate than before the intervention, 4% compared with 12.6% and 11 respectively. .4% versus 12.9%. Good body index after intervention increased CSHQ=13% and the difference was statistically significant (with $p < 0.01$; χ^2 McNemar). Besides, the mean score of body index after the intervention decreased statistically from 40.4 ± 14.2 points to 37.7 ± 11.9 points. This shows that the signs of the physical disease symptoms on the patient's body are significantly reduced. This result is similar to the research results of Andersen BL et al in 2007, when implementing an intervention program on female cancer patients including such contents as learning to relax the body, learning how to cope positively, make effective use of social support, learn how to solve problems for arising difficulties. Results from a series of simultaneous, ongoing interventions that produce significant outcomes such as reduced emotional distress, increased social support, improved diet, reduced change in chemotherapy, improved immunity, fewer symptoms and higher body function.

4.3. Strengths and limitations of the study

4.3.1. Strengths

This is also one of the few studies evaluating the effectiveness of psychological interventions for female patients with gynecologic cancer in combination with existing treatments.

4.3.2. Limitations

Firstly, due to limited resources, the same intervention program is conducted on patients with different levels, leading to the acquisition of knowledge and application of skills may be uneven among the target groups. Therefore, the results of the study indicate a significant change in the short term.

Secondly, the topic has not been able to collect evaluation indicators in many aspects such as effectiveness, suitability, feasibility, retention, awareness and patient satisfaction. Therefore, the indicators to evaluate the effectiveness of the intervention are mostly comparative measures before implementing the intervention and the achieved outputs are of short-term nature.

Third, the study group did not conduct a comparison with the control group. Therefore, these indicators mainly reflect the results obtained also through the questionnaire and the respondents' responses, so the realism may be limited.

CONCLUSION

1. Current status of quality of life of female patients with gynecologic cancer at K hospital 3

The mean overall quality of life score was 60.5 ± 19.2 points. In which, the physical function area had a mean QOL score higher than the overall quality of life score of 79 ± 20.2 points, while the quality of life score was the lowest in the symptom domain group, especially shortness of breath 12 ± 21.5 points

2. Factors related to QOL of GYNECOLOGIC CANCER patients

All criteria in the functional domain are positively correlated with quality of life ($p < 0.01$). Meanwhile, the symptom domain was negatively correlated with the patient's quality of life score. Demographic factors such as age, occupation, education, economic status, financial status are factors that can be used to predict the patient's QOL score.

3. Results after 6 months of psychological intervention

The effectiveness of the intervention after 6 months showed that the overall QOL score of female patients with gynecologic cancer increased significantly after the intervention compared to before the intervention ($p < 0.001$). In addition, functional area and improvement in symptoms of fatigue, vomiting, pain sensation, dyspnea and insomnia were all significantly improved after the intervention ($p < 0.001$).

The performance index showed a relative change compared to pre-intervention on individual stress indicators. The highest efficiency of sleep indicator, emotional indicator and body indicator (relative change compared to before intervention is 27%, 22% and 13%, respectively).

The increase in QOL score was statistically significant after the intervention in all treatments. However, psychological intervention combined with surgical treatment + Chemotherapy had the highest improvement ($t = -9.85$; with $p < 0.001$).

Patients with relatives supporting care during cancer treatment had the highest QOL improvement after intervention ($t = -19.93$; with

p<0.001).

RECOMMENDATIONS

1. Continuing to organize comprehensive training classes on psychological counseling and physical training for cancer patients.
2. In training for medical staff, attention should be paid to psychological counseling skills.
3. There should be a separate training program for doctors and lower levels of psychological counseling for patients.