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Survey and Analysis of Postoperative Quality of Life in Gynaecological Oncology Patients

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ABSTRACT

Goal: To investigate the current status of quality of life of postoperative patients with gynaecological tumours, and to analyse the relevant factors affecting the quality of life of postoperative patients with gynaecological tumours. **Method:** One hundred and fifty-three postoperative gynecological oncology patients who attended the gynaecology and oncology departments of three tertiary hospitals in Henan Province from June 2023 to March 2024 were investigated by convenience sampling method. The patients' postoperative survival quality was investigated through the General Information Survey Scale and Quality of Life Score Scale. **Results:** The quality of life measurement scale score of postoperative gynaecological oncology patients in this study was (121.27±10.87), in which there was a difference in the quality of life of postoperative gynaecological oncology patients of different age, education level, marital status, and per capita monthly income of the family, $p < 0.05$. **Conclude:** The quality of life level of postoperative gynaecological oncology patients is generally good, and age, literacy, marital status, and per capita monthly family income are important factors in the postoperative quality of life of gynaecological oncology patients. Healthcare professionals should focus on patients with older age, lower education level, unstable marital status, and poor economic status, and provide personalised targeted interventions to improve their quality of life.

1. Introduction

With the increase of people's life pressure and the change of life rhythm, gynecological tumours have become more and more common. According to the 2020 Global Cancer Statistics Report, there are about 1.35 million new cases of gynecological tumours in the world, which is a common disease endangering women's health at present, and poses a serious threat to women's life and health(Barten and Laan et al., 2021). The incidence of

gynaecological tumours has shown a growing trend in China in recent years, with cervical and ovarian cancers accounting for a relatively high percentage of cases, making them a major threat to women's health(Chan and Li et al., 2021).

In recent years, research on gynaecological tumours is being deepened both at home and abroad, from basic research to clinical research, from surgical treatment to adjuvant treatment, new methods and techniques are being explored, such as minimally invasive surgery and

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precision radiotherapy, which not only greatly improve the treatment effect, but also significantly reduce the physical trauma of the patients (Sun, 2021). Barten et al.'s research is even more through the magnetic resonance imaging technology (Iuso and Monacis et al., 2022), which offers a precise and accurate target for gynecological tumour patients with precise target radiotherapy regimens, thus improving patient prognosis, enhancing the therapeutic efficacy of gynecological tumours, and prolonging the survival period of gynecological tumours after surgery.

Gynaecological tumours not only destroy the female reproductive system and have an impact on a woman's appearance, but also adversely affect the patient's personal emotions (Aquil and El et al., 2021). With the deepening of health promotion policies, the goal of treating gynaecological tumours has gradually shifted from mere cure or control of the disease to placing more emphasis on the quality of life of gynaecological tumour patients in the postoperative period (Kano and Chen et al., 2021). In the process of surgical treatment, due to the resection of the reproductive system, postoperative radiotherapy and chemotherapy make the patients have their own image disorder, the patients' emotions are in a state of stress for a long time, and it is very easy to produce anxiety, depression, low self-esteem and other bad emotions (Obayashi and Nagamine et al., 2022), the patients will have a sense of discomfort in the organism that is difficult to be described through the subjective and objective language, which will directly affect the process of the recovery of the patients. In the process of postoperative recovery, if there is no good guidance and care, patients will face a series of physical and mental as well as family and social problems, and the quality of life of patients will be significantly affected. At the same time, persistent anxiety and depression will reduce the patient's appetite, leading to low body nutrition and decreased immunity, which will largely affect the quality of life of gynaecological tumour patients after surgery (He and Tong et al., 2021). Post-operative women with gynaecological tumours will suffer from changes in their own image and low self-esteem, which will affect the quality of their sleep and thus their quality of life (Nanthiphatthanachai and Insin, 2020).

Faced with the challenges of mood swings and declining quality of life common to gynaecological oncology patients, scholars at home and abroad have actively sought solutions to improve patients' quality of life through diversified approaches. Among them, psychotherapy plays a pivotal role in postoperative rehabilitation of gynaecological tumours (Mu and Wu et al., 2021). Through the meticulous intervention of

professional psychologists, patients are able to gradually establish positive self-knowledge and effectively alleviate negative emotions such as anxiety and depression, thus enhancing psychological resilience and life satisfaction (Li and Gong et al., 2022).

This study investigates the current situation of postoperative life of oncology patients, analyses the factors affecting the quality of life, and gives such patients targeted humanistic care to promote the improvement and enhancement of the quality of life of gynaecological oncology patients after surgery.

2. Objects and Methods

2.1 Subject of the study

One hundred and fifty-three patients with gynecological tumours who attended the gynaecology and oncology departments of three tertiary hospitals in Henan Province from June 2023 to March 2024 were selected by convenience sampling method.

Inclusion criteria: ① Patients who have been diagnosed as gynaecological tumours by pathological biopsy and have undergone surgical treatment. ② Have the ability of independent expression and can accurately and objectively answer the relevant questions raised in this questionnaire.

Exclusion criteria: ① patients who have suffered from major diseases in other parts of the body; ② patients with psychological and mental diseases; ③ patients with unclear expression and unable to describe their feelings accurately.

2.2 Research tools

2.2.1 General information survey

A general information questionnaire was designed on its own after reading the relevant literature and according to the needs of the survey, including age, place of residence, education level, marital status, monthly income level, number of children, a total of six items, which was used to collect the basic information about the participants of the study.

2.2.2 Quality of Life Measurement Scale for Cancer Patients

The Functional Assessment of Cancer Therapy (FACT) scale (Nandakumar and Veeriah et al., 2022) developed by Cella et al. at Rush-Presbyterian-St. Luke's Medical Centre, Chicago, USA, and 12 additional concern entries for specific cancer patients were used. The scale is divided into 5 domains with 39 entries, including 7 physical status, 7 social/family situation, 6 emotional status, 7 functional status, and 12 additional concern entries. A

5-point Likert scale was used, with a total score range of 0-156, with higher total scores indicating better quality of life. Among them, 0-74 is classified as poor quality of life, 75-104 is classified as fair quality of life, 105-134 is classified as good quality of life, and 135-150 is classified as satisfactory quality of life. The Cronbach's alpha coefficient of the scale used in this paper is 0.877, which meets the conditions for further data analysis.

2.3 Methods of investigation

The questionnaires were distributed to gynecological oncology patients who met the inclusion criteria through the Questionnaire Star applet, the requirements for completing the questionnaires were explained to the patients, and the questionnaires were carried out after obtaining the informed consent, and the questionnaires were also preliminarily examined during the process of questionnaire collection, and no logical errors or irrational settings were detected, which ensured the validity and reliability of the survey data obtained.

2.4 Statistical methods

The data collected in this study were statistically analysed using SPSS26.0 software. Among them, the count data were expressed as frequency and constitutive ratio, and the measure data were expressed as mean ± standard deviation, and the comparison of scores on the quality of life measurement scale of postoperative gynaecological oncology patients with different characteristics was performed by t-test or one-way ANOVA.

3. Results

3.1 General information on the study population

All 153 patients investigated in this study were confirmed by surgical pathology and had been treated with surgical interventions, 33.97% of them were concentrated in the age group of 36-45 years, and 54.56% of them had their place of residence in towns and cities, and the specific information is shown in Table 1.

Table 1. General information of the study population (n=153)

	Classification	Number (persons)	percentage
Age (years)	≤35	38	24.84%
	36~45	52	33.97%
	46~55	45	29.41%
	≥56	18	11.78%
Place of residence	Rural	68	44.44%
	Urban	95	54.56%
Literacy level	Primary school and below	30	19.61%
	Middle/High School	62	40.52%
	Speciality	35	39.87%
	Undergraduate and above	26	16.99%
Per capita monthly family income (yuan)	≤3000	29	18.95%
	3000~5000	54	35.29%
	5000~7000	56	36.60%
	≥7000	14	9.16%
Marital status	Unmarried	10	6.54%
	Married	128	83.66%
	Divorced/Widowed	15	9.8%
Number of children (number)	0	9	5.88%
Project	1	84	54.90%
Age (years)	>1	60	39.22%

3.2 Scores on the dimensions of the Quality of Life Measurement Scale for postoperative gynaecological oncology patients

The scores of the dimensions of the Quality of Life Measurement Scale for postoperative gynaecological

oncology patients in this study were physical status dimension (21.31±1.74), social/family status (21.08±2.27), affective status (19.62±2.58), functional status (21.66±1.93), and other (37.58±3.30), with a total score (121.27±10.87) points. Their scores for each dimension of the quality of life measurement scale are detailed in Table 2.

3.3 Comparison of scores on the Quality of Life Measurement Scale for postoperative gynaecological oncology patients with different characteristics

The results of the survey showed that there were

differences in the scores of the quality of life measurement scale among the respondents of different ages, educational levels, marital status, and per capita monthly household income, and the differences were statistically significant. ($P < 0.05$). See Table 3.

Table 2. Scores for each dimension of the Quality of Life Measurement Scale for postoperative gynaecological oncology patients (n=153, points)

Dimension	Entry	Scoring range	entry parity (accountancy)	Score ($\bar{x} \pm s$)
Physical Condition	7	0~28	3.04±0.25	21.31±1.74
Social/Family Status	7	0~28	3.01±0.32	21.08±2.27
Emotional	6	0~24	3.27±0.43	19.62±2.58
Functional Status	7	0~28	3.09±0.28	21.66±1.93
Other	12	0~48	3.23±0.275	37.58±3.30
Total	39	0~156	3.11±0.28	121.27±10.87

Table 3. Results of univariate analysis of postoperative quality of life in gynaecological oncology patients ($\bar{x} \pm s$ 分)

Project	Grouping	number of examples	Quality of life score	t/F	P
Age (years)	≤35	38	127.47±5.12	70.25	<0.01
	36~45	52	128.29±6.99		
	46~55	45	114.02±7.56		
	≥56	18	106.00±8.90		
Place of residence	Rural	68)	119.35±9.74	0.83*	0.41
	Urban	95	120.53±8.41		
Educational level	Primary school and below	30	115.47±11.02	13.54	<0.01
	Middle/High School	62	118.11±10.53		
	Speciality	35	127.51±8.07		
	Undergraduate and above	26	127.08±8.24		
Marital status	Unmarried	10	119.14±13.07	20.701	<0.01
	Married	128	123.18±9.45		
	Divorced/Widowed	15	106.20±9.54		
Per capita monthly family income (yuan)	≤3000	29	110.41±10.77	28.142	<0.01
	3000~5000	54	118.91±7.99		
	5000~7000	56	127.88±8.69		
	≥7000	14	126.43±7.57		
No. of children ((个))	0	9	119.67±9.30	0.102	0.9
	Project	1	84		
Age (years)	>1	60	121.38±11.07		

Note: * is a t value

4. Discussion

4.1 Analysis of postoperative quality of life scores of gynaecological oncology patients

As can be seen from the findings in Table 2, the total score of the Quality of Life Measurement Scale for Postoperative Patients with Gynaecological Tumours was (121.27±10.87), which is a good score for quality of life,

indicating that the patients with gynaecological tumours in this study were more satisfied with the quality of their life after the operation, and this result is in agreement with the findings of the study conducted by Feng Qian (Obayashi and Nagamine et al., 2022). In the results of this survey, regarding the scores of the dimensions of the Quality of Life Measurement Scale for postoperative gynaecological oncology patients, the scores, in descending order, were

emotional status, other, functional status, physical status and social/family status.

Patients with gynaecological oncology had the highest scores in the emotional status dimension. The reason for this may be analysed as follows: although the disease brings a great deal of psychological pressure, physical changes, and produces a change in social roles(He and Tong et al., 2021), different patients may show different emotional responses when facing the tumour, which can have a significantly different impact on changes in the quality of life in the postoperative period. Some patients with gynaecological oncology have good coping mechanisms and psychological resilience, and then they are often able to support themselves in maintaining a positive emotional state by tuning into themselves when faced with stresses due to illness and surgery (Nanthiphatthanachai and Insin, 2020). Good emotional state can not only promote the recovery of postoperative health to a great extent, but also relieve patients' physical and mental discomfort to a certain extent, thus improving their postoperative quality of life (Huang and Lin et al., 2021).

In this research survey, the social/family status dimension scored the lowest, and the reason for the analysis is that when suffering from the double trauma of disease and surgery, gynaecological oncology patients need more support from the family and the society, and some studies have shown that there is a positive correlation between the psychological health of patients with gynaecological oncology and the level of social support after surgery(Mu and Wu et al., 2021), and if the If patients can receive timely psychological support from their families after surgical treatment, their quality of life will be improved, on the contrary, patients who do not receive positive emotional feedback from their families will experience a significant decrease in their quality of life (Li and Gong et al., 2022). The physical condition score of postoperative gynaecological oncology patients was (3.04 ± 0.25) , which was slightly higher than the social/family condition score, and the reason for this may be that although the surgical trauma and postoperative complications associated with reproductive system diseases have a greater impact on the patients' physical condition, and the patients generally believe that their physical condition after the operation is not as good as before, and there is a situation in which their heart is more than willing to do the job, in order to avoid increasing the burden on their families, the patients will still go through postoperative rehabilitation. However, in order to avoid adding burden to the family, patients will still consciously improve their health quality through postoperative rehabilitation exercises (Choi and Cho, 2022).

Healthcare professionals should pay attention to the health guidance of patients' caregivers, help patients establish strong family support, instruct caregivers to give more care and love to patients, help patients re-establish their enthusiasm for life, and face the disease with a positive and sunny mindset, and pay attention to the postoperative needs and changes of gynaecological oncology patients' physical, social/family, and emotional conditions, so as to timely take positive measures to intervene (Jin and Guo et al., 2022).

4.2 Factors affecting postoperative quality of life in gynaecological oncology patients

4.2.1 Influence of age factors on postoperative quality of life in gynaecological oncology patients

As can be seen in Table 3, the postoperative quality of life scores of gynaecological oncology patients show a decreasing trend with increasing age, and Choi's (Choi and Cho, 2022) study also showed that the older the patient, the worse the quality of life of the oncology patients. In this study, about 40% of the women were older than 46 years old, and women in this age group may be experiencing menopause or perimenopause, and are prone to mood swings and irritability, which, coupled with the effects of the tumour, may further reduce the quality of life of women. Secondly, the older the patients are, the more their physical state will age, and the increased incidence of some underlying diseases that may occur in their own organisms, such as hyperglycaemia, hypertension, hyperlipidaemia, etc., will aggravate the patients' physical burden and affect their quality of life (Jin and Guo et al., 2022).Chitkumarn et al. showed that the younger the age of the post-surgical cervical cancer patients, the stronger the self-management ability and the higher the quality of life(Chitkumarn and Rahong et al., 2022). Therefore, the age factor will have an impact on the quality of life of postoperative gynaecological oncology patients to a certain extent. In order to improve the quality of life of postoperative gynaecological oncology patients, healthcare professionals need to pay attention to the specific needs of different age groups and provide personalised medical and social support services.

4.2.2 Impact of different literacy levels on postoperative quality of life of gynaecological oncology patients

As can be seen from Table 3, the higher the literacy level, the higher the quality of life scores of the patients, the results of this survey the lowest scores of patients with primary school and below, this result is consistent with the results of Falzarano's study (Nandakumar and Veeriah

et al., 2022). The reason for this may be that patients with different literacy levels have different levels of knowledge about the disease. The higher the literacy level of the patients, the more objective they can be about the disease through self-learning, and the more they can use certain means of guidance to reasonably regulate their own state of mind, face the disease with a positive and optimistic attitude, and better face the changes brought by the disease to their own bodies. On the other hand, patients with a lower level of education are mostly in a passive learning state, and their knowledge of the disease and health education often comes from healthcare personnel, and the information resources they obtain are limited, so they will have more negative emotions towards the discomfort brought by the disease and the change in the quality of life, and it is difficult to improve them through their own regulation, which will then affect the quality of life (Yamamoto and Yoshida et al., 2020). Therefore, healthcare professionals should focus on postoperative gynaecological oncology patients with a low level of literacy, strengthen communication and help them establish confidence in facing the disease positively and improve their quality of life.

4.2.3 Impact of marital status on postoperative quality of life of gynaecological oncology patients

From the results of the study in Table 2, it can be seen that patients whose marital status is married have higher quality of life scores and those who are divorced or widowed have the lowest quality of life scores, indicating that there is an impact of marital status on the postoperative quality of life situation of gynaecological oncology patients. The reason for this may be that family stability not only provides more emotional support to the patient, but also provides strong financial support (Ortiz, 2023). Married patients tend to have already had a reproductive history and accomplished their reproductive goals, so the importance placed on the reproductive system and the need for sexuality will be somewhat lower than that of unmarried patients. Unmarried patients, on the other hand, have higher expectations of reproductive system functioning and sexual quality of life, and therefore rate their quality of life lower. In addition, some studies have shown that marital status is an independent influence on the quality of life of postoperative patients. Therefore, healthcare providers should adopt appropriate health education during the treatment process to improve the knowledge of unmarried and divorced postoperative gynaecological oncology patients, to help them better cope with their own changes and to obtain more psychological support (Ortiz, 2024).

4.2.4 Impact of per capita monthly household income on postoperative quality of life of gynaecological oncology patients

As shown in Table 3, with the change in per capita monthly family income, the postoperative quality of life scores of gynaecological oncology patients also produce a change. Among them, patients with per capita monthly family income ≥ 7000 had the highest quality of life score of (126.43 ± 7.57) ; patients with per capita monthly family income ≤ 3000 had the lowest postoperative quality of life score of (110.41 ± 10.77) , so it can be concluded that the quality of life of patients with gynaecological tumours in the postoperative period decreases as the lower the family income is, which is consistent with the results of the study by Parse (Parse, 2021). The reason for this analysis may be that due to the complex and expensive treatment of tumours, the duration of treatment and the long recovery period after treatment, postoperative patients are more likely to face weakness, lack of energy and many discomforts caused by the side effects of medication, and they may feel anxious and depressed due to problems such as financial difficulties of their families (Haidopoulos and Pergialiotis et al., 2024). On the contrary, patients with higher per capita monthly household income tend to have more financial resources to cope with the various challenges posed by the disease (Zhu and Wang et al., 2020). They can choose better healthcare coverage options and receive more advanced and comprehensive treatments, thereby reducing the negative impacts of illness on physical health and quality of life. Therefore, family economic status as reflected by per capita monthly family income becomes an important influence on the postoperative quality of life scores of gynaecological oncology patients. We call on the healthcare-related departments to continue to improve and implement policies to improve the healthcare environment, so as to reduce the problem of oncology patients not being able to receive good treatment results due to their financial situation during the process of seeking medical treatment.

5. Conclusion

The overall postoperative quality of life of gynaecological oncology patients is in good condition and needs to be further improved. There are differences in the postoperative quality of life of gynaecological oncology patients with different age, education level, marital status, and per capita monthly family income. Improving the quality of life of gynaecological oncology patients after surgery requires the joint efforts of healthcare professionals, patients and their families as well as all

sectors of the society, and only through a comprehensive approach and multiple measures can the quality of life of gynaecological oncology patients be effectively improved and the prognosis be enhanced.

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