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Original Research

Clinical Effect of Psychological Nursing Combined with Fluoxetine in the Treatment of Postoperative Anxiety in Patients with Endometrial Cancer

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Abstract

Background: This study aimed to assess the effectiveness of a combined approach involving psychological nursing and fluoxetine in improving the mental well-being and quality of life in patients undergoing hysterectomy. **Methods**: Patients were categorized into three groups: control, intervention group A, and intervention group B, based on the nursing plan. The control group received routine nursing care, whereas intervention group A received routine nursing care and psychological support. Intervention B received routine nursing care, psychological support, and fluoxetine treatment. Psychological symptoms, anxiety, depression, quality of life, and nursing satisfaction were compared between the three groups before and after nursing interventions. **Results**: The outcomes of intervention groups A and B were superior to those of the control group. Furthermore, intervention group B outperformed intervention group A. After the interventions, the nursing satisfaction was higher in both intervention groups, A and B, compared to the control group. In contrast, intervention B exhibited the highest satisfaction scores, surpassing those of intervention group A. **Conclusions**: The combination of psychological nursing and fluoxetine therapy for patients with endometrial cancer undergoing hysterectomy holds significant promise in alleviating anxiety and depression, improving their overall quality of life, and increasing nursing satisfaction.

Keywords: endometrial cancer; psychological nursing; fluoxetine; anxiety; depression

1. Introduction

Endometrial carcinoma (EC) encompasses a group of malignant epithelial tumors originating in the endometrium. It ranks among the three most common malignancies in the female reproductive system, with a higher incidence among perimenopausal and postmenopausal women [1]. EC is the most prevalent gynecological cancer in developed countries [2]. Recent years have witnessed a gradual increase in the incidence of EC in China. The global statistics of 2020 revealed approximately 410,000 new EC cases and nearly 97,000 associated deaths, with China accounting for approximately 80,000 new cases [3,4]. Multiple factors, such as obesity, diabetes, high estrogen levels, and contraceptive abuse, are linked to EC incidence, with obesity being a vital contributor [5,6]. The established clinical approach for EC treatment involves comprehensive staged operative procedures, including total hysterectomy and bilateral appendages or fertility-preserving options [7,8]. However, given the limited prospects of a complete cure, the postoperative recovery of most patients with significant adverse emotions, such as low mood, anxiety, and depression, is markedly impeded. Wang *et al*. [9] showed that the incidence of postoperative anxiety and depression in patients with EC was 15.55% and 32.77%, respectively. ther studies have shown that depression, anxiety, and inflammatory factors may exacerbate pain during recovery from gynecological malignancies [10]. Consequently, it is necessary to administer varying degrees of nursing care to expedite their recovery.

With the evolution of the medical model, public awareness of diseases has expanded beyond purely physical factors, recognizingthe growing influence of psychological and social factors on patients [11]. Psychological nursing has emerged as an applied discipline in the modern healthcare model's transformation. While traditional medical models were solely grounded in biology, contemporary medical concepts have extended the framework to encompass the interplay of biology, psychology, and society, elevating the significance of patients' psychological well-being within the medical system. This paradigm shift underscores the complementary roles of medicine and psychology, paving the way for psychology's integration into medical practice [12]. The merits and demerits of psychological conditions exert varying degrees of influence on patients' recovery and overall physical and mental health [13]. Patients with EC, due to apprehensions about the disease and surgery, and concerns about their future, commonly experience a degree of mental disability, frequently manifesting as depression, anxiety, or fear. Clinically, patients with severe depressive tendencies are commonly prescribed an-

tidepressants such as fluoxetine to alleviate depression and anxiety [14]. However, a judicious blend of medical interventions remains pivotal in enhancing patients' psychological well-being and overall quality of life.

The role of psychological nursing in patients undergoing surgery for EC was elucidated by selecting 100 such patients as research participants. They were assessed for the impact of postoperative psychological nursing combined with fluoxetine on improving the psychological state of patients.

2. Materials and Methods

2.1 Inclusion of the Study Population

100 patients undergoing operation for EC at the First Hospital of Xingtai were selected. In our hospital, the cost of post-operative nursing is based on the different types of care. The costs of the three models of nursing mentioned in the study increased with the amount of care provided. Therefore, for the consideration of humanization, we have carried out different postoperative nursing methods for different patients according to their preferences and financial abilities. These patients were divided into three groups: control group (n = 32), intervention group A (n = 33) and intervention group B (n = 35). Inclusion criteria were as follows: (1) EC confirmed via ultrasonography and pathology; (2) patients who underwent modified radical hysterectomy; (3) patients who had not received chemoradiotherapy before admission and were expected to survive for >6 months. Exclusion criteria included vaginitis, pelvic inflammation, other gynecological diseases, depression, anxiety, mental diseases, other malignancies, coagulation dysfunction, and a history of pelvic surgery. This study received ethical approval from the Ethics Committee of the First Hospital of Xingtai (ethical approval number: 2020-10-19) and adhered to the ethical standards outlined in the 1975 Helsinki Declaration. All subjects have signed informed consent. G*Power 3.1 software (G*Power, Release 3.1, Dusseldorf, Germany) was used to calculate the sample size. To achieve alpha value = 0.05 and power = 0.80, 30 participants are required in each group.

2.2 Identification of Psychological Nursing Team Members

The intervention group consisted of 1 gynecologic oncologist, 1 psychologist, 1 gynaecological head nurse and 2 nurses. The responsibility of the gynecologic oncologist is to revise and review the educational knowledge related to the diagnosis and surgery of the EC, and to provide professional guidance to the head nurse and researchers. The responsibility of psychologists lies in the formulation, modification and review of psychological nursing interventions. The head nurse is responsible for the development of educational knowledge. The nurse is responsible for reviewing the literature and providing psychological care to the patient under the guidance of the doctor and the head nurse.

2.3 Determination of Psychological Nursing Methods

Literature search was conducted by reviewing domestic and foreign literature databases such as CNKI, Wanfang Data, Pubmed, *etc*. Keywords such as "endometrial cancer", "radical hysterectomy", "postoperative anxiety and depression", and "psychological nursing" were searched to understand the relevant researches at home and abroad. At the same time, combined with the relevant contents of psychological intervention in the Manual of Psychological Treatment for Cancer Patients, the intervention contents and measures of psychological nursing were preliminarily drawn up and modified by the group members. Finally, under the strict review of medical oncology experts, clinical nursing experts and psychological experts, the psychological nursing intervention methods in this study were finally determined.

2.4 Postoperative Management of Partcipants

Control group: the control group recieved routine nursing care. Postoperatively, the patient's vital signs were monitored to ensure they stayed within the expected range, promooting a smooth recovery. The nursing staff guided patients to choose comfortable positions. Furthermore, the surgical site was closely observed, and the patients were regularly enquired about any discomfort.

Intervention group A: the intervention group A received routine nursing care and psychological nursing. Psychological support: the psychological state of the patient was preliminarily assessed. Psychological nursing plan included the following components: (1) Emotional support involved compassionate communication understand patients' perception of their condition, rectifying any misconceptions, and presenting cases with favorable outcomes to improve the patients' postoperative psychological endurance. (2) Disease understanding, which included explaining the cause of the disease, its mechanisms, the operative plan, preventive measures, and detailed nursing measures. Nurses attentively listened to patients' complaints, provided appropriate explanation, and offered guidance to enhance disease awareness. (3) Social support, focused on creating a comportable ward environment, ensuring optimal indoor air quality, temperature, and humidity, teaching relaxation techniques, and promoting emotional stability. (4) Family involvement. Where family members of patients received education on maintaining a healthy lifestyle, emotional stability, avoiding triggers, aghering to medication, and encouraging patients to adopt a positive outlook on life.

Intervention group B: the intervention group B received routine nursing care, psychological nursing, and fluoxetine treatment. For patients with mild depression, negative emotions, anxiety, and fear symptoms, health education and psychological comfort were prioritized. For those suffering from severe anxiety or depression, fluoxetine was recommended to beadministered under the guidance of a psychologist to alleviate their negative mood. Drug infor-

mation: fluoxetine hydrochloride capsule (Patheon France, Suzhou, Jiangsu, China. National medicine approval number HJ20160501). Dosage: oral, 20 mg once daily. All of these interventions lasted for 4 weeks in each group.

2.5 Observational Indexes

Scale evaluation is one of the important indexes used to evaluate nursing effect throughout the whole nursing process and is done at our hospital routinely. The medical staff responsible for the assessment of the scale will fully communicate with the patient and guide them to complete the scale. The following are the main scales used in this study.

(1) Symptom Checklist 90 (SCL-90): all patients were assessed using the SCL-90 before and after nursing intervention [15]. The SCL-90 comprises 90 self-assessment items organized into 9 subscales: somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, phobia, paranoia, and psychoticism. The scale in this study has good reliability and validity (Cronbach's alpha = 0.81).

(2) Self-rating anxiety scale (SAS) [16] and self-rating depressive scale (SDS) [17]: before and following nursing interventions, all patients were tested using the SAS and SDS before and after nursing intervention to assess the severity of anxiety and depression. In this study, both SAS and SDS had good internal consistency, with the Cronbach's alpha of 0.8 and 0.75, respectively.

(3) Medical outcome study short form 36 scales (MOS SF-36) [18]: patients' quality of life was assessed using the MOS SF-36, as recommended by the World Health Organization (WHO). This scale comprises 36 items cateegorized into 8 dimensions: physiological function, role-physical, physical pain, general health, vitality, social function, role-emotional, and mental health. The internal consistency and reliability of the MOS SF-36 are acceptable. Our statistical analysis shows that it has good reliability (Cronbach's alpha 0.89).

(4) Patient nursing satisfaction: patients' satisfaction with the nursing care provided was evaluated using a hospital-designed questionnaire. Scores >90 indicated high satisfaction, those between 60 and 80 showed moderate satisfaction, while scores <60 indicated dissatisfaction. In this study, the internal consistency of this scale is good, and its Cornbach's alpha is 0.71.

2.6 Data Analysis

SPSS 19.0 software (SPSS Company, Chicago, IL, USA) was used for data analysis. Categorical data were represented as "n", and the Chi-square test was adopted. Measurement data conforming to normal distribution are expressed as (mean $\pm$ standard deviation (SD)). When the data were normally distributed and met the homogeneity of variance, paired T-test was used for intra-group comparison and one-way analysis of variance (ANOVA) was used for inter-group comparison. Two-way ANOVA was used to determine within-group changes across time and group-time interactions. $p < 0.05$ was considered statistically significant.

3. Results

3.1 Comparison of Baseline Data

A total of 100 participants were arranged into three groups on the basis of intervention method. The baseline data for the three groups are summarized in Table 1. There were no statistically significant differences in age, marital status, underlying diseases, education level, or occupation type among the three groups, indicating comparability ($p > 0.05$).

3.2 Comparison of Psychological Symptoms before and after Nursing Intervention in Three Groups

As shown in Table 2, after intervention, the scores of intervention group A and intervention group B were lower than those before intervention ($p < 0.05$), while the scores of control group patients after intervention were also lower than those before intervention, indicating that intervention is effective for improving patients' symptoms. The three groups of patients had different improvement effects on the SCL-90 scale after different intervention methods. Obsessive-compulsive symptoms, hostility, terror, paranoia and psychoticism all had interaction between time and intervention factor ($p < 0.05$). The above results indicated that the SCL-90 scores of the three groups of patients changed over time, and the degree of change was different. Furthermore, the results of inter-group comparison at different time points were analyzed. Before the nursing intervention, the scores on each subscale of the SCL-90 scale were consistent across all three groups of patients (Fig. 1A, $p > 0.05$). After the intervention, the scores of intervention group A on six items including interpersonal relationships are lower than those of the control group, while the scores of intervention group B on all items except for three items including interpersonal relationships are significantly lower than those of the control group and intervention group A. These results indicated that the intervention mode based on routine nursing + psychological nursing + fluoxetine could significantly improve patients' symptom self-assessment after intervention (Fig. 1B, $p < 0.05$).

3.3 Comparison of Anxiety-Depressive Conditions among the Three Groups before and after Nursing Intervention

As shown in Table 3, intra-group comparison showed that after intervention, SAS scores and SDS scores of intervention group A and intervention group B were lower than before intervention ($p < 0.05$), but SDS scores of intervention group A were not statistically significant compared with before intervention ($p > 0.05$). In addition, different intervention methods had different improvement effects on the anxiety of the three groups. The results showed that there was an interaction between intervention methods and

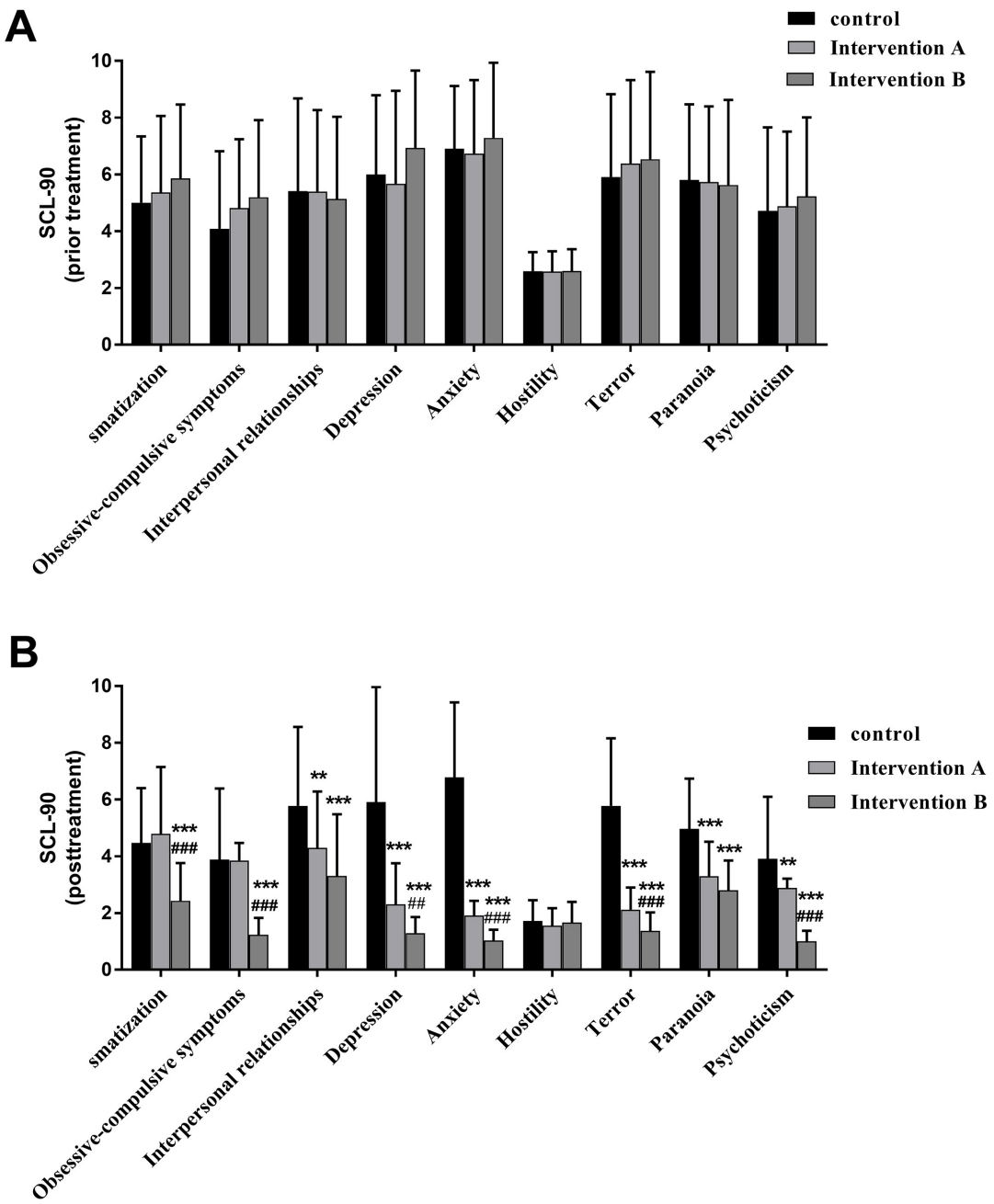

Fig. 1. Comparison of SCL-90 scores between groups. Comparison of SCL-90 scores before (A) and after nursing intervention (B) among the three groups. $^{**}p < 0.01$, $^{***}p < 0.001$ *vs.* Control group; $^{\#\#}p < 0.01$, $^{\#\#\#}p < 0.001$ *vs.* Intervention group A. SCL-90, Symptom Checklist 90.

time in the score of anxiety improvement effect, indicating that the anxiety of the three groups of patients changed differently over time after intervention ($p < 0.05$). Upon further analysis, there were no significant differences in SAS and SDS scores among the three groups before receiving nursing intervention (Fig. 2A, $p > 0.05$). After nursing intervention, SAS and SDS scores of intervention group A and intervention group B were lower than those of control group, and there were significant differences between the three groups, among which intervention group B had the lowest score, indicating that intervention method of intervention group B was better than intervention group A and control group in reducing SAS and SDS scores (Fig. 2B, $p < 0.01$).

3.4 Comparison of Quality of Life in the Three Groups before and after Nursing Intervention

Table 4 shows that intervention groups A and B achieced significantly higher scores after the intervention than before ($p < 0.001$). These results indicate that intervention groups A and B significantly improved the patients' quality of life. Moreover, after intervention, the quality of

Table 1. Comparison of general conditions of patients with endometrial cancer.

Items	Control (n = 32)	Intervention A (n = 33)	Intervention B (n = 35)	*p*
Age (years)	46.44 ± 14.14	47.33 ± 13.34	45.51 ± 14.78	0.868
Marriage (n)				0.516
Yes	30	28	31	
No	2	5	4	
Hypertension (n)				0.486
Yes	20	25	23	
No	12	8	12	
Diabetes (n)				0.636
Yes	5	8	6	
No	27	25	29	
Education (n)				0.069
Secondary or below	14	20	25	
Post-secondary education	18	13	10	
Occupation type (n)				0.913
Worker	22	22	25	
Housewife	10	11	10	

Annotation: all data are expressed as mean ± standard deviation or n.

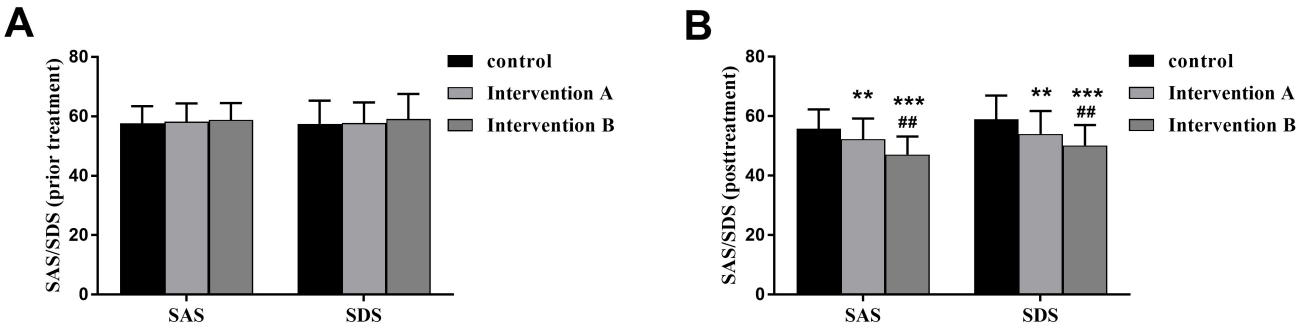

Fig. 2. Comparison of SAS/SDS scores between groups. Comparison of SAS/SDS scores before (A) and after nursing intervention (B) among the three groups. $^{**}p < 0.01$, $^{***}p < 0.001$ *vs*. Control group; $^{\#\#}p < 0.01$ *vs*. Intervention group A. SAS, self-rating anxiety scale; SDS, self-rating depression scale.

life (role physical, physiological function, body pain, mental health, function of emotion) scores of the three groups also interacted between time and intervention factors ($p < 0.05$). The scores of all dimensions of the Short Form-36 (SF-36) scale were comparable the three groups before intervention (Fig. 3A, $p > 0.05$). Following the intervention, scores in intervention groups A and B increased in some dimensions relative to the control group. In intervention group B, the scores of all subscales, except physical pain, were the highest (Fig. 3B, $p < 0.01$).

3.5 Comparison of Nursing Satisfaction among the Three Groups of Patients

As shown in Table 5, after analyzing the questionnaire responses, it was determined that 34 patients in intervention group B expressed satisfaction with the nursing intervention plan, resulting in a satisfaction rate of 97.14%, which was higher than both the control group and intervention group A ($p < 0.001$).

4. Discussion

Nursing has evolved beyond the conventional role of overseeing patients' physical health and implementing doctor's orders, but to constantly meet people's new demands for medical services and pay attention to maintaining patients' mental health on the premise of ensuring patients' good physical condition and stable recovery [19]. With the changing and innovative modern medical model, psychological nursing has gained increasing significance and has found widespread application in clinical nursing practice. This study demonstrated that implementing psychological nursing reduced postoperative anxiety and depression levels in patients while enhancing their quality of life across various dimensions. The combination of psychological nursing and fluoxetine treatment yielded more substantial reductions in anxiety and depression levels, and improved quality of life compared to psychological nursing alone. Overall, patients receiving psychological nursing expressed higher satisfaction than those in the control group,

Table 2. Comparison of the scores of different intervention measures and SCL90 self-rating scale (time × group 2 × 3).

Items	Group	Before	After	Time × group analysis (p value)
Somatization	Control	5.00 ± 2.34	4.47 ± 1.93	$F_{(2,94)} = 10.78$, $p = 0.05$
	Intervention A	6.37 ± 2.69	4.79 ± 2.36**	
	Intervention B	5.86 ± 2.60	2.43 ± 1.33***	
Obsessive-compulsive symptoms	Control	4.09 ± 2.73	3.88 ± 2.51	$F_{(2,94)} = 10.79$, $p = 0.042$
	Intervention A	4.82 ± 2.42	3.85 ± 0.62**	
	Intervention B	5.20 ± 2.71	1.23 ± 0.60***	
Interpersonal relationships	Control	5.41 ± 3.27	5.78 ± 2.78	$F_{(2,94)} = 8.36$, $p = 0.053$
	Intervention A	5.40 ± 2.87	4.30 ± 1.98	
	Intervention B	5.14 ± 2.89	3.31 ± 2.17***	
Depression	Control	6.00 ± 2.79	5.91 ± 4.06	$F_{(2,94)} = 5.83$, $p = 0.058$
	Intervention A	5.67 ± 3.28	2.30 ± 1.45***	
	Intervention B	6.94 ± 2.72	1.29 ± 0.57***	
Anxiety	Control	6.91 ± 2.21	6.78 ± 2.64	$F_{(2,94)} = 9.06$, $p = 0.051$
	Intervention A	6.73 ± 2.60	1.91 ± 0.52***	
	Intervention B	7.29 ± 2.65	1.03 ± 0.38***	
Hostility	Control	2.59 ± 0.67	1.72 ± 0.73***	$F_{(2,94)} = 15.25$, $p = 0.002$
	Intervention A	2.58 ± 0.71	1.55 ± 0.62***	
	Intervention B	2.60 ± 0.77	1.66 ± 0.73***	
Terror	Control	5.91 ± 2.92	5.78 ± 2.38	$F_{(2,94)} = 12.35$, $p = 0.018$
	Intervention A	6.39 ± 2.94	2.12 ± 0.78***	
	Intervention B	6.54 ± 3.08	1.37 ± 0.65***	
Paranoia	Control	5.81 ± 2.66	4.97 ± 1.77	$F_{(2,94)} = 10.98$, $p = 0.046$
	Intervention A	5.73 ± 2.67	3.30 ± 1.21***	
	Intervention B	5.63 ± 3.00	2.80 ± 1.05***	
Psychoticism	Control	4.72 ± 2.94	3.91 ± 2.19	$F_{(2,94)} = 14.64$, $p = 0.011$
	Intervention A	5.73 ± 2.67	2.88 ± 0.33***	
	Intervention B	5.23 ± 2.78	1.00 ± 0.00***	

Annotation: SCL90, Symptom Checklist 90. All data are expressed as mean ± standard deviation. **$p < 0.01$, ***$p < 0.001$, within-group comparisons.

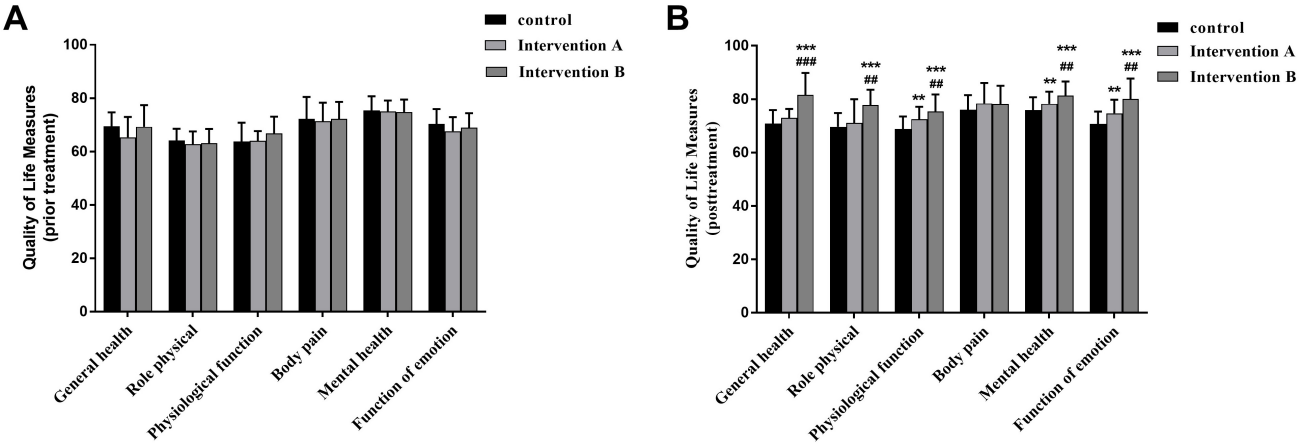

Fig. 3. Comparison of SF-36 scores between groups. Comparison of SF-36 scores before (A) and after nursing intervention (B) among the three groups. $^{**}p < 0.01$, $^{***}p < 0.001$ *vs.* Control group; $^{\#\#}p < 0.01$, $^{\#\#\#}p < 0.001$ *vs.* Intervention group A. SF-36, Short Form-36.

with the highest satisfaction reported in the group receiving psychological nursing combined with fluoxetine.

EC is a tumor of predominantly affects perimenopausal and postmenopausal women, mainliy occurring in the uterine epithelium, clinical manifestations of pain, menstrual abnormalities, vaginal discharge, and exhibits an increasing incidence yearly [20,21]. Currently, surgical treatment remains the primary clinical approach for this disease. However, as a traumatic treatment method, surgical treatment could evoke various negative emotions

Table 3. Comparison of anxiety among the three groups (time × group 2 × 3).

Items	Group	Before	After	Time × group analysis (p value)
SAS	Control	57.69 ± 5.73	55.81 ± 6.51	$F_{(2,94)} = 15.375$, $p = 0.004$
	Intervention A	58.24 ± 6.12	52.30 ± 6.93***	
	Intervention B	58.83 ± 5.70	47.09 ± 6.05***	
SDS	Control	57.50 ± 7.77	58.94 ± 8.05	$F_{(2,94)} = 11.417$, $p = 0.043$
	Intervention A	57.76 ± 6.97	54.06 ± 7.69	
	Intervention B	59.09 ± 8.47	50.14 ± 6.86***	

Annotation: SAS, self-rating anxiety scale; SDS, self-rating depression scale. All data are expressed as mean ± standard deviation. ***$p < 0.001$, within-group comparisons.

Table 4. Comparison of quality of life scores among the three group (time × group 2 × 3).

Items	Group	Before	After	Time × group analysis (p value)
General health	Control	69.44 ± 5.23	70.88 ± 5.03	$F_{(2,94)} = 9.56$, $p = 0.56$
	Intervention A	65.36 ± 7.64	72.94 ± 3.42***	
	Intervention B	69.26 ± 8.13	81.66 ± 8.15***	
Role physical	Control	64.16 ± 4.41	69.63 ± 5.18***	$F_{(2,94)} = 11.15$, $p = 0.046$
	Intervention A	62.79 ± 4.74	71.12 ± 8.84***	
	Intervention B	63.11 ± 5.35	77.83 ± 5.73***	
Physiological function	Control	63.75 ± 7.05	68.88 ± 4.67***	$F_{(2,94)} = 16.40$, $p = 0.003$
	Intervention A	64.00 ± 3.67	72.48 ± 4.70***	
	Intervention B	66.74 ± 6.34	75.37 ± 6.37***	
Body pain	Control	72.25 ± 8.21	76.03 ± 5.47	$F_{(2,94)} = 19.13$, $p = 0.001$
	Intervention A	71.39 ± 6.93	78.39 ± 7.71***	
	Intervention B	72.23 ± 6.37	78.17 ± 6.85***	
Mental health	Control	75.38 ± 5.37	75.94 ± 4.75	$F_{(2,94)} = 20.36$, $p < 0.001$
	Intervention A	75.06 ± 4.09	78.24 ± 4.55***	
	Intervention B	74.77 ± 4.73	81.31 ± 5.30***	
Function of emotion	Control	70.41 ± 5.51	70.72 ± 4.63	$F_{(2,94)} = 13.58$, $p = 0.032$
	Intervention A	67.61 ± 5.31	74.67 ± 5.14***	
	Intervention B	69.00 ± 5.40	80.03 ± 7.68***	

Annotation: all data are expressed as mean ± standard deviation. ***$p < 0.001$, within-group comparisons.

postoperatively. These emotions hinder disease recovery and potentially damage tissues, adversely impacting patient prognoses [22]. Wang *et al.* [23] showed that nearly all patients with cervical cancer undergoing laparoscopic modified radical hysterectomy experienced varying degrees of depression. A meta-analysis highlighted that post-stroke depressive mood occurred in 33% of cases, with patients experiencing depression encountering 3–4 times higher 10-year fatality rates than non-depressed patients [24]. This finding underscores how negative emotions impede patient recovery, whether after the disease or operation. Therefore, it becomes imperative to actively and effectively engage in postoperative intervention for this patient group to improve the treatment effects and the prognoses.

Psychological nursing is tailored to address patients' negative emotions by offering empathetic companionship and psychological support to help alleviate psychological stress, thereby improving clinical treatment compliance [25]. Initially, emotional support involves providing encouragement and understanding to the patient. Subsequently, by enhancing disease awareness, patients could clarify the significance of treatment and how to manage their condition. Lastly, social support through family participation involves patients feeling the goodwill of family and society; it provides emotional sustenance and diverts their attention, preventing the escalation of negative emotions. Xie *et al.* [26] reported that psychological intervention significantly improved the mental well-being of patients who underwent hysterectomy and positively influenced the postoperative recovery of pelvic floor function. This study's findings align with the research of Bateman *et al.* [27], demonstrating that psychological nursing effectively mitigates postoperative anxiety and depression in patients with EC. However, the improvement of anxiety and depression was more evident in the group treated with fluoxetine than in the group treated with psychological intervention alone. Fluoxetine, a selective serotonin reuptake inhibitor, has demonstrated exceptional effectiveness as an antidepressant [28]. This study shows that an appropriate combination of psychological nursing with targeted fluox-

Table 5. Comparison of nursing satisfaction among three groups.

Items	Control (n = 32)	Intervention A (n = 33)	Intervention B (n = 35)	*p*
Great satisfaction (n)	10	13	22	<0.001
Satisfaction (n)	12	15	12	
Dissatisfaction (n)	10	5	1	
Nursing satisfaction rate	68.75%	84.85%	97.14%	

Note: $p < 0.05$ was considered as significant difference.

etine treatment significantly reduces patients' anxiety and depression within a specified wimeframe, with fluoxetine improving the effect of psychological nursing.

Generally speaking, a healthy person will produce a series of unique psychological activities after entering the role of a patient, often due to the torture of the disease, the strange hospital diagnosis and treatment environment, and the emergence of new interpersonal relationships. The task of psychological nursing is that medical workers through a series of good psychological nursing measures, to affect the patient's feelings and understanding, change the patient's psychological state and behavior, as far as possible for patients to create the best psychological ring state beneficial to treatment and rehabilitation, so that they can recover as soon as possible [29]. Psychological nursing is vital in clinical nursing, extending its reach across various clinical departments, including internal medicine, surgery, obstetrics and gynecology, pediatrics, and other critical areas [30]. The scope of psychological nursing extends from the patient's mental state and the disease to the patient's family, community, preventive care, and improving the patient's quality of life. During the process of clinical nursing, the implementation of psychological nursing positively improves the patient prognosis by alleviating anxiety and depression, making it a valuable approach for broader in clinical healthcare.

However, several limitations of this study cannot be ignored. Firstly, the experimental results might be biased due to time constraints, limited data from a small population, and a restricted pool of clinical data. Secondly, the study included only a single sex due to the nature of the disease, indicating that gender differences in mental endurance cannot be excluded. Additionally, the study's single-center sample selection might be limited by geographical restrictions, potentially limiting the broader clinical applicability of the research conclusions. In the future, expanding the sample size and exploring postoperative psychological intervention for other types of diseases would enhance the clinical validity of these concluions.

5. Conclusions

Current research demonstrates that for patients undergoing clinical hysterectomy, the combination of psychological nursing and fluoxetine treatment significantly alleviates postoperative anxiety, depression, and other adverse emotions. The combination approach improves patients' quality of life and substantially enhances their nursing satisfaction. These findings represent favorable outcomes for managing postoperative depression in clinical practice. Therefore, for patients experiencing depression, anxiety, and other negative emotions after major operative procedures, a proactive approach involving psychological therapy alongside drug treatment is recommended. Enhancing patients' understanding of drug treatment could encourage active cooperation and synergistic effects between psychological and medication, which are conducive to symptom improvement and patient recovery.

Availability of Data and Materials

Corresponding authors may provide data and materials.

Author Contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by WY, LLW, JW and LW. The first draft of the manuscript was written by NS and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Ethics Approval and Consent to Participate

The study protocol was approved by the Ethics Committee of the First Hospital of Xingtai (ethical approval number: 2020-10-19) and followed the principles outlined in the Declaration of Helsinki. In addition, informed consent has been obtained from the participants involved.

Acknowledgment

Not applicable.

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Conflict of Interest

The authors declare no conflict of interest.

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