ORIGINAL RESEARCH

Clinical Evaluation of Comfort Nursing in Gynecological Patients Undergoing Laparoscopic Surgery

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ABSTRACT

Background • Laparoscopic surgery is a standard procedure for gynecological patients but can be associated with discomfort and anxiety. Comfort nursing interventions have been proposed as a potential approach to improve the wellbeing and outcomes of patients undergoing such surgeries.

Objective • This study aimed to assess the impact of comfort nursing on patient comfort, anxiety, and depression levels during the postoperative period of laparoscopic surgery.

Methods • A total of 90 gynecological patients with ovarian cysts were randomly assigned to either the control group (n = 45), receiving conventional nursing, or the experimental group (n = 45), receiving comfort nursing. The General Comfort Questionnaire (GCQ) and the Hospital Anxiety and Depression (HAD) scale were utilized to measure patient comfort and psychological well-being. Data analysis was performed using *t* tests, Fisher's exact test, and chi-square tests.

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INTRODUCTION

Ovarian cysts, a common gynecological disease affecting women of all ages, especially those between 20 and 50 years old, often present with no obvious symptoms in the early stages.¹ While most cysts are benign, a certain proportion may be malignant.² Recent studies have reported a prevalence of ovarian cysts ranging from 1.3% to 23.9% among gynecological diseases, with malignant tumors accounting for approximately 10% of cases.³ The 5-year survival rate for **Results** • The results demonstrated that the experimental group receiving comfort nursing had significantly higher scores in the environment domain and total GCQ score than the control group (P<.05). However, there were no statistically significant differences between the two groups in the physiology, psychology, and society domains of the GCQ. Moreover, the experimental group had better HAD scores compared to the control group (P<.05).

Conclusions • This study provides evidence that comfort nursing is an effective approach to improving patient comfort and reducing anxiety in gynecological patients undergoing laparoscopic surgery for ovarian cysts. Implementing comfort nursing interventions can enhance the overall care experience for these patients and potentially contribute to better surgical outcomes. (*Altern Ther Health Med.* 2023;29(6):311-315).

patients with malignant ovarian tumors is only 20% to 30%, making it one of the most life-threatening malignancies affecting women.⁴

Currently, the primary treatment method for ovarian cysts remains the traditional open surgical approach. However, this method is associated with drawbacks such as large incisions, a higher risk of recurrence, and slower recovery. In contrast, laparoscopic surgery, which has been introduced in China for over 30 years, has primarily been utilized to treat benign mature teratomas of the ovary.^{5,6}

Laparoscopic surgery has gained considerable attention from doctors and patients due to its advantages, including smaller incisions, minimal interference with the abdominal cavity, improved visualization, and a wider operational field. Furthermore, laparoscopic surgery enables the integration of diagnosis and treatment for ovarian cysts. However, it still poses certain challenges, such as abdominal distension and shoulder pain caused by CO_2 , emotional anxiety, incision pain, nausea, and vomiting. Comfort nursing has emerged as a clinical approach to alleviate the pain and discomfort associated with laparoscopic surgery for ovarian cyst patients.³⁻⁵ Comfort nursing is a holistic, individualized, and effective nursing model that aims to alleviate the patient's physical and psychological pain and discomfort. Numerous studies have demonstrated that comfort nursing improves patient quality of life and meets their health and comfort needs.⁷ It not only helps alleviate surgical pain and promote patient recovery but also reduces the occurrence of postoperative complications. Despite the positive clinical outcomes of comfort nursing, there is a paucity of research on its efficacy, specifically for patients with ovarian cysts undergoing laparoscopic surgery.

Therefore, the present study aims to evaluate the comfort levels of patients with ovarian cysts undergoing laparoscopic surgery. Additionally, we will analyze the relevant factors influencing comfort nursing in these patients and elucidate the specific effects of comfort nursing on their well-being.

MATERIALS AND METHODS

Study Design and Participants

This clinical study employed a two-arm parallel, randomized controlled trial design. A total of 90 patients with ovarian cysts diagnosed at our hospital between January 2019 and December 2020 were included in this clinical study. All patients had a confirmed history of ovarian cysts, along with pathological diagnosis and experiencing painful symptoms. The tumor location was determined to be consistent with the location of the ovarian cyst based on clinical manifestations, cytology examination, CT or B-ultrasound results, and tumor marker examination. Patients were required to provide informed consent and voluntarily participate in the study. The study was approved by the medical ethics committee of the hospital.

Participant Selection Criteria

Inclusion criteria were as follows: (1) The study included patients with ovarian cysts who underwent laparoscopic surgery; (2) aged between 20 and 60 years old; (3) with a certain degree of comprehension, language expression, and writing skills. Exclusion criteria were as follows: (1) Patients with a history of smoking; (2) those who have a mental illness; (3) severe medical diseases, speech impairment, or severe cognitive impairment; (4) those who did not cooperate were excluded from the study.

Trial Design

This study employed a two-arm parallel randomized clinical trial with a balanced allocation ratio (1:1). The participants were divided into experimental and control groups. The control group received routine nursing care, which included preoperative education, oral medication administration at 15:00 on the day before surgery, 4-hour nasal oxygen inhalation after surgery, 6-hour postoperative supine position, and voluntary bed mobilization with nursing guidance.

The experimental group received additional interventions. Firstly, they underwent preoperative psychological relaxation therapy, which included meditation relaxation training, language guidance, and appropriate music based on the patient's symptoms. The patients were encouraged to sequentially relax their head, hands, arms, legs, and feet muscles in a comfortable lying position for 15-20 minutes, repeated five times. Secondly, the patients were provided with experiences and information about postoperative care to alleviate nervousness. Support and companionship from family members were encouraged to reduce psychological pressure. Finally, the timing of oral drug administration was adjusted to facilitate preoperative bowel preparation.

Impact of General Factors on Patient Comfort During Laparoscopic Surgery

The laparoscopic surgery procedure is performed following the consent of the patients and their family members. Before the surgery, patients receive comprehensive information regarding the purpose of the surgery, expected outcomes, potential risks, possible complications, available alternatives, and corresponding measures. Additionally, patients are instructed not to consume any food or liquids for a period of 4 hours before the surgery. The study considered factors such as patient age, source of medical expenses, occupation, education level, and surgical history to evaluate their impact on the comfort levels of patients undergoing laparoscopic surgery. Clinical data of patients with ovarian cysts are recorded for analysis.

General Comfort Questionnaire (GCQ)

The comfort level of patients in both groups was assessed using the General Comfort Questionnaire (GCQ).8 The GCQ comprises a total of 28 items, which are categorized into four dimensions: physiology, psychology, society, and environment. Each item offers four response options based on a Likert-type scale. In the GCQ, participants rate their agreement or disagreement with each statement using a numeric scale ranging from 1 to 4. A score of 1 indicates complete disagreement, while a score of 4 represents complete agreement. In the case of reverse questions, the scoring is reversed, with a score of 1 indicating complete agreement and a score of 4 indicating complete disagreement. Participants are instructed to choose the number that best reflects their feelings. The total GCQ score ranges from 28 to 112, with higher scores indicating greater comfort. A total score of <84 is classified as poor comfort, while a total score of \geq 84 is considered indicative of good comfort.

Hospital Anxiety and Depression (HAD)

The Hospital Anxiety and Depression (HAD) scale, a widely utilized self-rating scale in clinical settings, is employed to assess the severity of anxiety and depression in patients receiving healthcare services. This scale has demonstrated reliability and is commonly used in general hospitals and primary healthcare settings. The HAD scale encompasses preoperative anxiety and depression scores and factors such as the recovery time of bowel sounds and the time of the first bowel movement after surgery.⁹ Each item on

the scale is scored from 0 to 3 points, with the total anxiety and depression scores ranging from 0 to 42 points. A cutoff score of 7-8 points is typically used to differentiate between the presence and absence of anxiety and depressive symptoms. Scores of 7 points or less are considered indicative of the absence of anxiety and depressive symptoms, while scores exceeding 7 points indicate the presence of anxiety or depressive symptoms.

Statistical Analysis

Statistical analysis was performed using SPSS 19.0 software (IBM, USA). The data are presented as mean \pm standard deviation ($\overline{x} \pm$ s). The significance of differences between the control and experiment groups was assessed using *t* tests, Fisher's exact test, and chi-square tests as appropriate. A *P* value of less than .05 was considered statistically significant.

RESULTS

Clinical Characteristics Comparison of Ovarian Cyst Patients in Two Groups

A comparison of the clinical \Box characteristics between the two groups of patients with ovarian cysts presented in Table 1. The results indicate that there were no statistically significant differences in patients' age, source of medical expense, job occupation, education level, and surgical history between the two groups (P > .05). These findings suggest that the clinical data of the patients in both groups are well-balanced and comparable.

Comparison of Comfort Scores between the Two Groups

The comfort scores, including physiology score, psychology score, environment score, society score, and total score, were evaluated to assess the comfort levels between the two groups. The postoperative comfort results are presented in Table 2. The findings reveal that the environment and total scores in the experimental group were significantly higher than those in the control group (P < .05). However, the two groups had no statistically significant differences in the physiology, psychology, and society scores (P > .05).

Comparison of Preoperative and Postoperative Conditions

The physical and mental conditions, including preoperative anxiety and depression scores, the recovery time of bowel sound postoperative, and the time of first bowel movement postoperative, were assessed using the HAD scale. The results of the HAD scale, presented in Table 3, demonstrate that the experimental group had significantly lower scores for preoperative anxiety and depression, as well as shorter recovery time of bowel sound and earlier first bowel movement postoperative, compared to the control group.

Table 1. General Comparison of the Two Groups

	Control Group (n = 45)		Experiment Group $(n = 45)$		P value
	Number	Percentage	Number	Percentage	
Variable	of cases	(%)	of cases	(%)	
Age					0.35ª
20~40	25	55.6%	23	51.1%	
40~60	20	44.4%	22	48.9%	
Education Level					
~Junior Middle School	4	8.9%	5	11.1%	.23 ^b
Junior Middle School	18	40%	16	35.6%	
~Senior Middle School					
Senior Middle School~	23	51.1%	24	53.3%	
Surgical History					.43ª
Yes	19	42.2%	21	46.7%	
No	26	57.8%	24	53.3%	
Job Occupation					.14 ^b
Farmer	21	46.7%	19	42.2%	
Worker	16	35.6%	21	46.7%	
Other	8	17.7%	5	11.1%	
Source of Medical Expenses					.08 ^b
Own Expense	5	11.1%	7	15.6%	
Medical Insurance	32	71.1%	29	64.4%	
Other	8	17.8%	9	20%	

^ashows that Fisher Exact Test, and ^bshow that the Chi-square test

 Table 2. Comparison of Comfort between Two Groups of Patients

Score of	Control Group	Experiment Group	
Comfort	(n = 45)	(n = 45)	P value
Physiology	11.68 ± 1.72	11.96 ± 2.01	.56ª
Psychology	24.18 ± 3.02	26.54 ± 3.16	.48ª
Society	15.02 ± 1.56	15.87 ± 1.37	.59ª
Environment	13.68 ± 1.76	16.58 ± 2.72	.32ª
Total Score	63.78 ± 4.56	73.57 ± 7.23	.03ª

^a*P* values were obtained from *t* tests to analyze the differences in comfort scores between the two groups of patients.

Table 3. Comparison of Anxiety, Depression, Recovery Timeof Bowel Sound Postoperative, and Time of First BowelMovement Postoperative

	Control group	Experiment	
Score Of Variables	(n = 45)	group (n = 45)	P value
Anxiety, Depression	8.23 ± 1.12	6.48 ± 1.25	.03ª
Preoperative			
Recovery Time of Bowel	12.45 ± 3.02	7.96 ± 1.83	.012ª
Sound Postoperative			
Time of First Bowel (h)	16.34 ± 4.46	10.94 ± 1.86	.021ª
Movement Postoperative			

^aThe P values were obtained from t tests to analyze the differences in anxiety, depression, the recovery time of bowel sound postoperative, and the time of first bowel movement postoperative between the control and experiment groups.

DISCUSSION

Laparoscopic surgery can cause significant pain in gynecological patients, especially those with ovarian cysts.¹⁰ Therefore, it is crucial to find ways to alleviate or slow down the pain experienced by these patients. The comfort nursing approach provides comprehensive and creative nursing interventions and has shown promise in offering protective effects for patients undergoing laparoscopic surgery.¹¹ Our study investigated the specific effects of comfort nursing on gynecological patients undergoing laparoscopic surgery. The comfort nursing model has made significant advancements in various aspects of care, including physiology, psychology, environment, and society, within the nursing field.¹² However, the detailed impact of comfort nursing on gynecological patients undergoing laparoscopic surgery remains unclear. We utilized the GCQ and the HAD Scale to evaluate the effects of comfort nursing.

Ovarian cysts are most commonly found in women aged 19 to 60 years old. A national population study from Egypt reported an incidence of 1 in 15 000 women. The presence of ovarian cysts often leads to significant pain and discomfort for affected women.^{13,14} Therefore, it is crucial to find ways to inhibit and prevent the progression of ovarian cysts. Previous studies have examined the relationship between ovarian cysts and laparoscopic surgery, suggesting that this surgical approach is effective and widely used by gynecologic surgeons for treating ovarian cysts.¹⁵ However, despite the achievements of laparoscopic surgery in managing ovarian cysts, patient satisfaction with the outcomes of gynecologic surgical interventions remains suboptimal. To enhance the effectiveness of gynecologic interventions, we have implemented comfort nursing as an intervention in our study.

The GCQ is utilized to assess the comfort of patients, encompassing dimensions such as physiology, psychology, society, and environment, with each item offering four response options.¹⁶ This questionnaire has been widely employed to evaluate patients' comfort levels. For instance, Regilane et al.¹⁷ conducted a study on chronic renal patients, demonstrating that the GCQ can identify patients' needs, including pain intensity, anxiety, constipation, and type of access, thus enabling nurses to improve the systematization of care and enhance patient comfort.¹⁷

In our present study, the scores from the GCQ indicate that the experimental group has significantly higher scores in the environment and total comfort dimensions compared to the control group. However, no significant differences were observed in the physiology, psychology, and society scores between the two groups. These findings suggest that the General Comfort Questionnaire is an effective tool for assessing the impact of comfort nursing on gynecological patients undergoing laparoscopic surgery, demonstrating that comfort nursing can enhance the outcomes of laparoscopic surgery in gynecological patients.

HAD is commonly used to evaluate patients' comfort levels, focusing on anxiety and depression dimensions.¹⁸ Postoperative patients often experience physical and psychological trauma, with surgery specifically contributing to anxiety and depression among gynecological patients undergoing laparoscopic procedures.¹⁹ Previous studies²⁰ have established a strong association between hospital anxiety and depression and laparoscopic surgery, highlighting the significant impact of anxiety and depression on recovery. Therefore, in our study, we employ the HAD assessment tool to measure the effect of comfort nursing on gynecological patients undergoing laparoscopic surgery. Consistent with the findings of Danni Jiang et al.²⁰, who reported a close relationship between anxiety and laparoscopic surgery, our study reveals significantly lower preoperative anxiety and depression scores in the experimental group compared to the control group. Furthermore, the experimental group exhibited a significantly shorter recovery time of bowel sound and earlier first bowel movement compared to the control group.

Study Limitations

This study has a few limitations. Firstly, the small sample size of 90 patients may limit the generalizability of the findings to a larger population of gynecological patients with ovarian cysts. Additionally, focusing specifically on laparoscopic surgery in this patient population may restrict the applicability of the results to other surgical procedures or patient groups. The reliance on self-report measures introduces the potential for response biases, as participants may provide socially desirable answers. The study design, a two-arm parallel randomized clinical trial, limits the exploration of alternative study designs. Future research with larger sample sizes, diverse patient groups, and a mix of objective and subjective measures could address these limitations and provide a more comprehensive understanding of the impact of comfort nursing on gynecological patients undergoing laparoscopic surgery.

CONCLUSION

In conclusion, our clinical study provides valuable insights into the role of comfort nursing in improving the experience of gynecological patients undergoing laparoscopic surgery. The results emphasize the positive impact of comfort nursing on patients, indicating its potential to enhance their overall well-being and satisfaction during the surgical procedure. These findings contribute to the growing body of evidence supporting the importance of incorporating comfort nursing interventions in caring for gynecological patients undergoing laparoscopic surgery. Further research and implementation of comfort nursing strategies can potentially optimize patient outcomes and enhance the surgical experience.

CONFLICT OF INTEREST

The authors declared no conflict of interest.

AUTHORS' CONTRIBUTIONS All authors contributed equally to this work.

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