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Original Article

Influence of humanistic care on negative emotions, nursing quality, and patient satisfaction in outpatient gynecological surgery

Yunni Zhang, Wei Xia, Tingting Liu

Department of Outpatient Nursing, The Second Affiliated Hospital of Zhejiang University of Traditional Chinese Medicine, Hangzhou 310000, Zhejiang, China

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Abstract: Objective: To explore the impact of humanistic care on negative emotions, nursing quality and patient satisfaction among women undergoing outpatient gynecological surgery. Methods: This retrospective study involved 108 patients who underwent outpatient gynecological surgery at the Second Affiliated Hospital of Zhejiang University of Traditional Chinese Medicine between August 2022 and August 2023. The patients were divided into two groups: 51 patients received routine care (control group) and 57 received humanistic care (experimental group). Data collected included vital signs (heart rate [HR] and systolic/diastolic blood pressure [SBP/DBP]), pain levels (Visual Analogue Scale [VAS] scores at 12 and 24 hours postoperative), negative emotions (Self-rating Anxiety/Depression Scale [SAS/SDS]), comfort (Kolcaba's General Comfort Questionnaire [GCQ]), sexual functioning (Brief Index of Sexual Functioning for Women), nursing quality (errors, defects, and complaints) and patient satisfaction. Results: Intraoperative SBP, DBP, along with HR, were significantly lower in the experimental group compared to the control group (all $P<0.05$). Postoperative pain levels at both 12 and 24 hours were also significantly reduced in the experimental group (both $P<0.01$). Furthermore, the experimental group demonstrated significant reductions in SAS and SDS scores and higher GCQ scores across physical, psychospiritual, environmental, and sociocultural dimensions (all $P<0.05$). There were no significant differences between the groups in terms of sexual desire, activity, and satisfaction (all $P>0.05$). Nursing quality was significantly better ($P=0.029$) and patient satisfaction with nursing care was higher ($P=0.015$) in the experimental group. Conclusions: Humanistic care significantly reduces negative emotions and enhances comfort, nursing quality, and patient satisfaction in women undergoing outpatient gynecological surgery. This approach does not affect sexual functioning indicators but offers substantial improvements in overall patient care and outcomes. Its high value for clinical promotion underscores its potential as a transformative approach in outpatient gynecological settings.

Keywords: Humanistic care, outpatient gynecological surgery, negative emotions, nursing quality, satisfaction

Introduction

Outpatient gynecological surgeries, including intrauterine device placement or removal, induced abortion, hydrotubation, uterine curettage, and cervical dilatation, are significantly influenced by the patient's age and reproductive stage [1, 2]. Although these procedures are typically brief, they can induce significant physical and psychological trauma [3]. Patients undergoing such surgeries often experience anxiety and depression due to fears about the surgery, doubts about overcoming illness, or concerns about postoperative pain and discomfort [4]. These negative emotions can compromise the effectiveness of anesthesia and surgical outcomes [5].

Furthermore, the diversity of procedures and the complexity of required care elevate the demands for professionalism and empathy from nursing staff in obstetrics and gynecology clinics [6, 7]. This study aims to enhance the outpatient nursing experience and patient satisfaction for those undergoing outpatient gynecological surgery.

Traditional nursing often provides only basic care, struggling to meet the increasing demands for comprehensive health management in out-

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patient gynecological settings [8]. In contrast, humanistic care represents an advanced nursing intervention model that emphasizes respect, attention, and compassionate care throughout the nursing process [9, 10]. This approach not only addresses the physical needs but also supports the psychological well-being of patients, offering a more holistic health management strategy than routine care [11, 12].

Previous research has highlighted the benefits of humanistic care in various clinical settings. For instance, Liu et al. found that humanistic care in a neurosurgical intensive care unit (ICU) enhanced nursing quality, reduced infection rates, and improved patient outcomes [13]. Similarly, Gao et al. reported that humanistic care for ovarian cancer patients alleviated stress, facilitated recovery, and improved quality of life [14].

Despite these advances, research on the impact of humanistic care on negative emotions, nursing quality, and patient satisfaction specifically in outpatient gynecological surgery is limited. This study seeks to address this gap, aiming to improve the nursing experience for patients undergoing such procedures.

Materials and methods

Patient data

This retrospective study was approved by the Ethics Committee of the Second Affiliated Hospital of Zhejiang University of Traditional Chinese Medicine.

Inclusion Criteria: (1) Patients undergoing outpatient gynecological surgeries, including intrauterine device removal or replacement, induced abortion, hydrotubation, uterine curettage, and cervical dilatation. (2) Absence of vital organ dysfunction. (3) Normal cognitive and communication abilities with no mental illnesses. (4) Complete case data available. (5) Demonstrated good compliance and willingness to cooperate with the study.

Exclusion Criteria: (1) Contraindications to surgery. (2) Presence of infectious diseases or hematological system disorders. (3) Diagnosis of malignant tumors. (4) Autoimmune deficiencies.

The study enrolled 108 patients who underwent outpatient gynecological surgeries at the Second Affiliated Hospital of Zhejiang University of Traditional Chinese Medicine from August 2022 to August 2023. The subjects were divided into two groups: 51 patients in the control group who received routine nursing care, while 57 patients in the experimental group who received humanistic care. Baseline data between the experimental and control groups showed no significant differences (all $P>0.05$), indicating comparability of the groups for clinical analysis.

Methods

The control group received routine nursing care, which included:

Preoperative Preparations: Nursing staff assisted surgeons during operations and managed various medical orders. Postoperatively, nurses monitored the affected area to prevent complications. In addition, patients received health education with face-to-face instructions and videos; with attentive guidance on diet, medication, and daily activities.

Experimental group: The experimental group received comprehensive humanistic care, encompassing:

Optimized Surgical Environment: Nurses arranged the outpatient operating room to create a warm, clean, and comfortable environment, using educational media to familiarize patients with the surgical process and environment.

Psychological Care: Nurses provided perioperative psychological support, establishing trust through proactive communication, respecting privacy, and addressing psychological needs. They also instructed patients on self-care and encouraged patients to maintain prescribed treatments and healthy behaviors.

Perioperative Humanistic Care: Nurses explained surgical and anesthesia procedures preoperatively, addressed patients' concerns, and encouraged a positive outlook towards the surgery. During surgery, nurses ensured patient comfort by closely monitoring them and providing pain relief as needed.

Postoperative Monitoring: Post-surgery, nurses observed incision conditions, performed asep-

tic dressing changes, and administered antibiotics for contaminated wounds. They also instructed patients on wound care to prevent bacterial infection.

Nursing Team Development: The hospital conducted regular training in theoretical knowledge and nursing skills, quickly integrating new instruments and technologies. Performance assessments were linked to incentives to enhance learning enthusiasm among nursing staff. Emphasis was placed on humanistic care, with staff being encouraged to provide care with a positive demeanor to ensure patients felt genuinely cared for.

Outcome measures

Vital Signs: Heart rate (HR) and systolic/diastolic blood pressure (SBP/DBP) were measured using a sphygmomanometer before and after treatment to monitor physiological responses to the surgery and nursing care.

Pain Degree: The intensity of pain at 12 and 24 hours post-surgery was quantified using the Visual Analogue Scale (VAS), with scores ranging from 0 (no pain) to 10 (severe pain), indicative of the pain level experienced by the patient [15].

Negative Emotions: The severity of anxiety and depression was assessed using the Self-rating Anxiety/Depression Scale (SAS/SDS), which includes 20 items with a maximum score of 80 points; higher scores indicate more severe anxiety or depression [16].

Comfort Level: Patients' comfort was evaluated post-intervention using Kolcaba's General Comfort Questionnaire (GCQ), covering physical (total score: 32), psychospiritual (total score: 36), sociocultural (total score: 28), and environmental (total score: 16) aspects.

Quality of Sexual Life: Sexual functioning was assessed using the Brief Index of Sexual Functioning for Women (BISF-W), evaluating aspects like sexual desire, activity, and satisfaction, with scores directly reflecting the quality of sexual life.

Nursing Quality: Incidences of nursing defects, errors, and complaints were recorded, and the frequency of these events was calculated to evaluate the quality of nursing care provided.

Nursing Satisfaction: Patient satisfaction with nursing care was gauged using a self-developed nursing satisfaction questionnaire, scored from 0 (dissatisfied) to 100 (very satisfied). Overall satisfaction was calculated by summing the rates of patients who were satisfied and very satisfied.

Statistical analysis

Continuous variables, expressed as mean ± standard deviation (SD), were analyzed using independent sample t-tests for between-group comparisons and paired t-tests for within-group comparisons. Categorical variables, presented as percentages, were analyzed using the χ^2 test. All statistical analyses were conducted using SPSS version 21.0, with a significance threshold set at $P<0.05$.

Results

Comparison of baseline data

The baseline characteristics of the experimental and control groups were similar in terms of age, weight, duration of intrauterine pregnancy, primigravida status, marital status, and type of outpatient surgery (all $P>0.05$). This equivalence is detailed in **Table 1**.

Comparison of vital signs

Preoperative heart rates were 72.98±6.39 beats/min in the control group and 75.4±6.62 beats/min in the experimental group, with intraoperative rates rising to 90.14±5.31 beats/min and 84.96±5.33 beats/min, respectively. Systolic blood pressure (SBP) before surgery was 123.24±11.77 mmHg in the control group and 122.32±10.21 mmHg in the experimental group, increasing during surgery to 151.0±12.11 mmHg and 139.89±8.28 mmHg, respectively. DBP levels preoperatively were 77.53±5.57 mmHg in the control group and 77.07±5.84 mmHg in the experimental group, with intraoperative values at 94.59±6.45 mmHg and 87.89±8.11 mmHg, respectively. There were no significant preoperative differences in HR, SBP, or DBP between the groups (all $P>0.05$); however, intraoperative values significantly increased and were higher in the experimental group (all $P<0.05$). These findings are illustrated in **Figure 1**.

Table 1. Comparison of baseline information

Factors	Control group (n=51)	Experimental group (n=57)	χ^2/t	P
Age (years old)	29.96±5.73	32.11±5.87	1.922	0.057
Weight (kg)	54.84±11.57	51.74±12.04	1.361	0.177
Intrauterine pregnancy time (d)	51.37±4.15	50.25±4.37	1.362	0.176
Primigravida			0.141	0.708
Yes	25 (49.02)	30 (52.63)		
No	26 (50.98)	27 (47.37)		
Marriage			0.289	0.591
Married	39 (76.47)	41 (71.93)		
Single	12 (23.53)	16 (28.07)		
Type of outpatient surgery			1.784	0.878
Intrauterine device removal	13 (25.49)	15 (26.32)		
Induced abortion	12 (23.53)	12 (21.05)		
Hydrotubation	9 (17.65)	12 (21.05)		
Intrauterine device placement	11 (21.57)	8 (14.04)		
Uterine curettage	4 (7.84)	6 (10.53)		
Uterus enlargement	2 (3.92)	4 (7.02)		

Comparison of pain levels

The VAS scores for pain 12 hours post-surgery were 3.67±1.28 in the control group and 2.04±0.82 in the experimental group, and 24 hours post-surgery were 1.65±0.52 and 1.18±0.38, respectively. The experimental group demonstrated significantly lower VAS scores at both 12 and 24 hours postoperatively compared to the control group (both P<0.05). These results are presented in **Figure 2**.

Comparison of negative emotions

The SAS and SDS were used to assess negative emotions. Preoperative SAS scores were 53.47±4.76 in the control group and 54.16±6.73 in the experimental group, reducing to 46.55±6.01 and 40.75±4.91 postoperatively, respectively. SDS scores were 49.22±5.31 and 51.19±5.63 preoperatively in the control and experimental groups, reducing to 46.16±5.6 and 38.81±5.26, respectively. Both SAS and SDS scores were similar between the groups before intervention (both P>0.05), but showed a significant reduction in both groups post-intervention, with more pronounced decreases in the experimental group (both P<0.05). These findings are depicted in **Figure 3**.

Comparison of comfort

Patient comfort was evaluated using the GCQ scale. The physical dimension scores were 24.49±4.62 in the control group and 28.86±2.29 in the experimental group. Psychospiritual scores were 29.55±2.72 for the control and 32.18±2.93 for the experimental group. Sociocultural scores were 22.29±2.89 in the control group versus 24.23±2.62 in the experimental group. Environmental scores were 12.39±2.09 for the control group and 14.35±1.48 for the experimental group. Across all dimensions - physical, psychospiritual, sociocultural, and environmental, the experimental group scored significantly higher than the control group (all P<0.05), as shown in **Figure 4**.

Comparison of sexual quality of life

The BISF-W assessed sexual quality of life, revealing no significant differences in sexual desire, activity, and satisfaction scores between the groups post-nursing (all P>0.05), illustrated in **Figure 5**.

Comparison of nursing quality

In the control group, there were 3 cases (5.88%) each of nursing defects and errors, and 2 cases (3.92%) of nursing complaints. In the experimental group, there was 1 case (1.75%) each of nursing defects and errors, and no nursing complaints (0.00%). There was a significant difference in the total incidence of nursing adverse events between the two groups (P<0.05), detailed in **Table 2**.

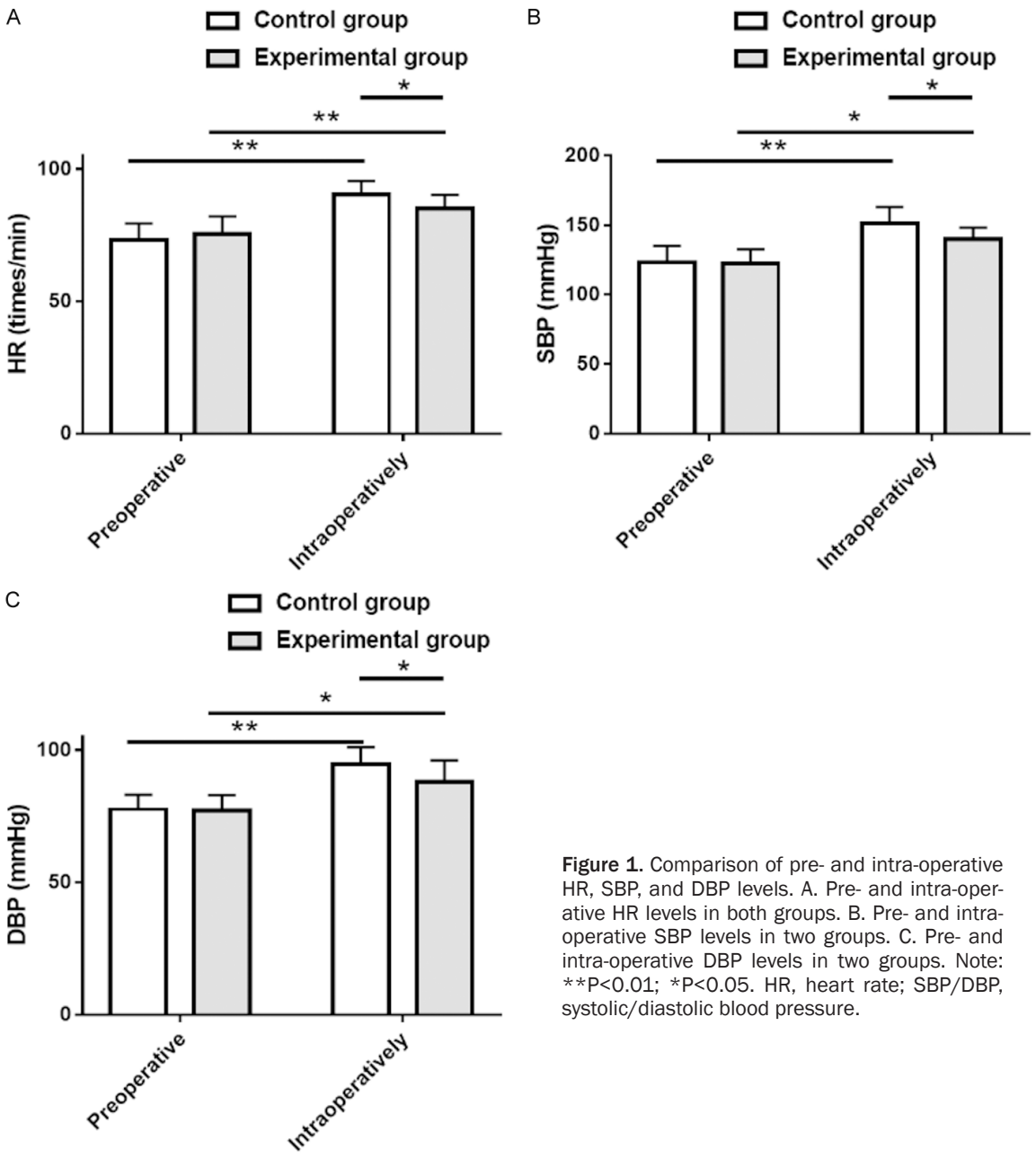

Figure 1. Comparison of pre- and intra-operative HR, SBP, and DBP levels. A. Pre- and intra-operative HR levels in both groups. B. Pre- and intra-operative SBP levels in two groups. C. Pre- and intra-operative DBP levels in two groups. Note: **P<0.01; *P<0.05. HR, heart rate; SBP/DBP, systolic/diastolic blood pressure.

Comparison of patient satisfaction

Patient satisfaction was assessed across three levels: very satisfied, satisfied, and dissatisfied. Total satisfaction rates were 82.35% in the control group and 96.49% in the experimental group, indicating a significant difference (P<0.05), as documented in **Table 3**.

Discussion

This study examined the vital signs of patients and observed that while HR, SBP, and DBP significantly increased post-surgery in the experimental group, these indicators were still notably lower compared to the control group. This suggests that humanistic care more effectively stabilizes vital signs in patients undergoing outpatient gynecological surgery than routine care. This finding underscores the potential of humanistic care in enhancing patient stability and comfort during and after surgical procedures.

In their study, Gao et al. [17] found that humanistic care significantly reduced SBP and DBP

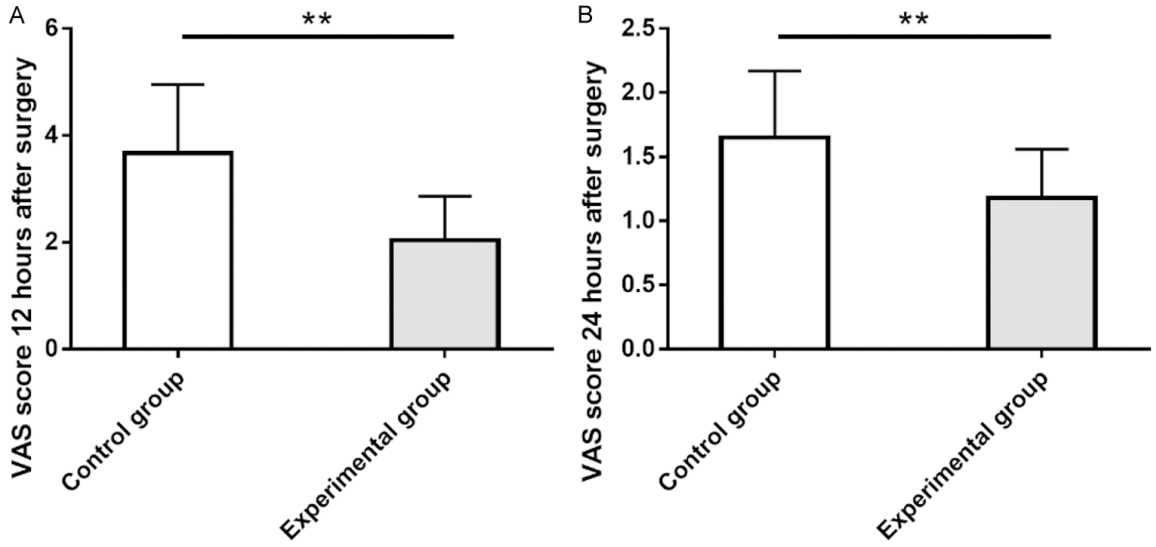

Figure 2. The degree of pain at 12 hours and 24 hours after surgery. A. 12-hour postoperative VAS scores in two groups. B. 24-hour postoperative VAS scores in two groups. Note: ** represents P<0.01. VAS, Visual Analogue Scale.

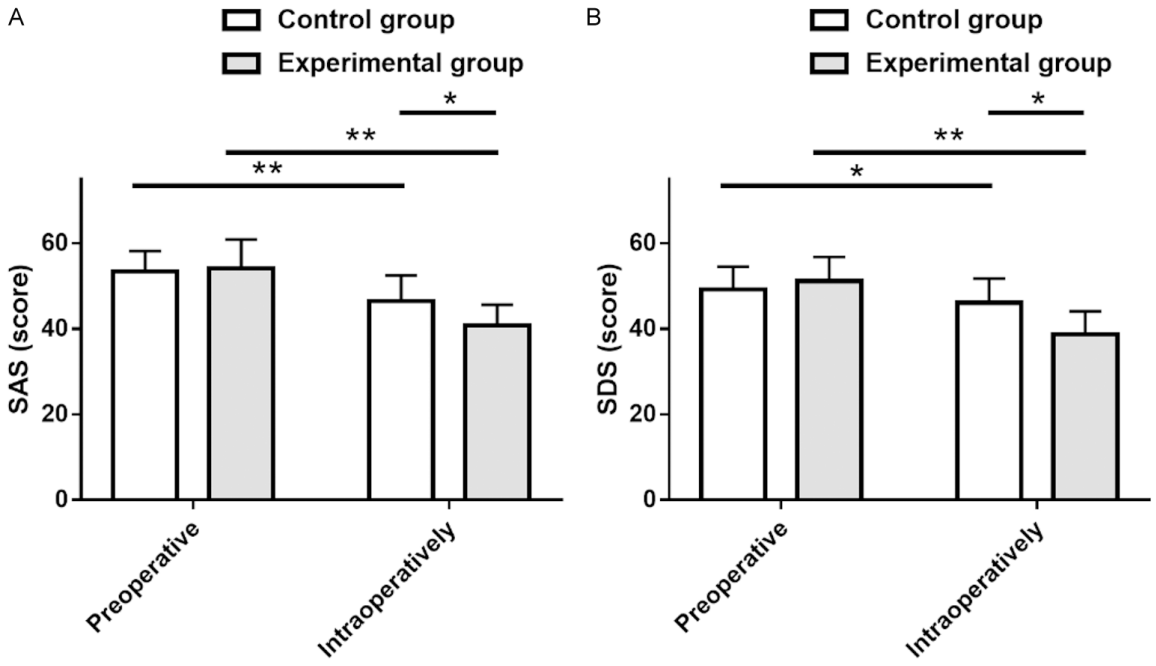

Figure 3. Comparison of SAS and SDS scores before and after nursing. A. SAS scores before and after care in two groups. B. SDS scores before and after care in two groups. Note: ** and * represent P<0.01 and P<0.05, respectively. SAS/SDS, Self-rating Anxiety/Depression Scale.

levels and increased recovery efficiency for outpatients with trigeminal neuralgia, findings which align with our results. The positive impact of humanistic care is likely due to the provision of a comfortable pre-surgical environment that helps patients quickly adapt and prepare psychologically [18].

Regarding postoperative pain management, our study observed that the 12-hour and 24-hour postoperative VAS scores were significantly lower in the experimental group compared to the control group, indicating that humanistic care enhances postoperative analgesia in outpatient gynecological surgery. This

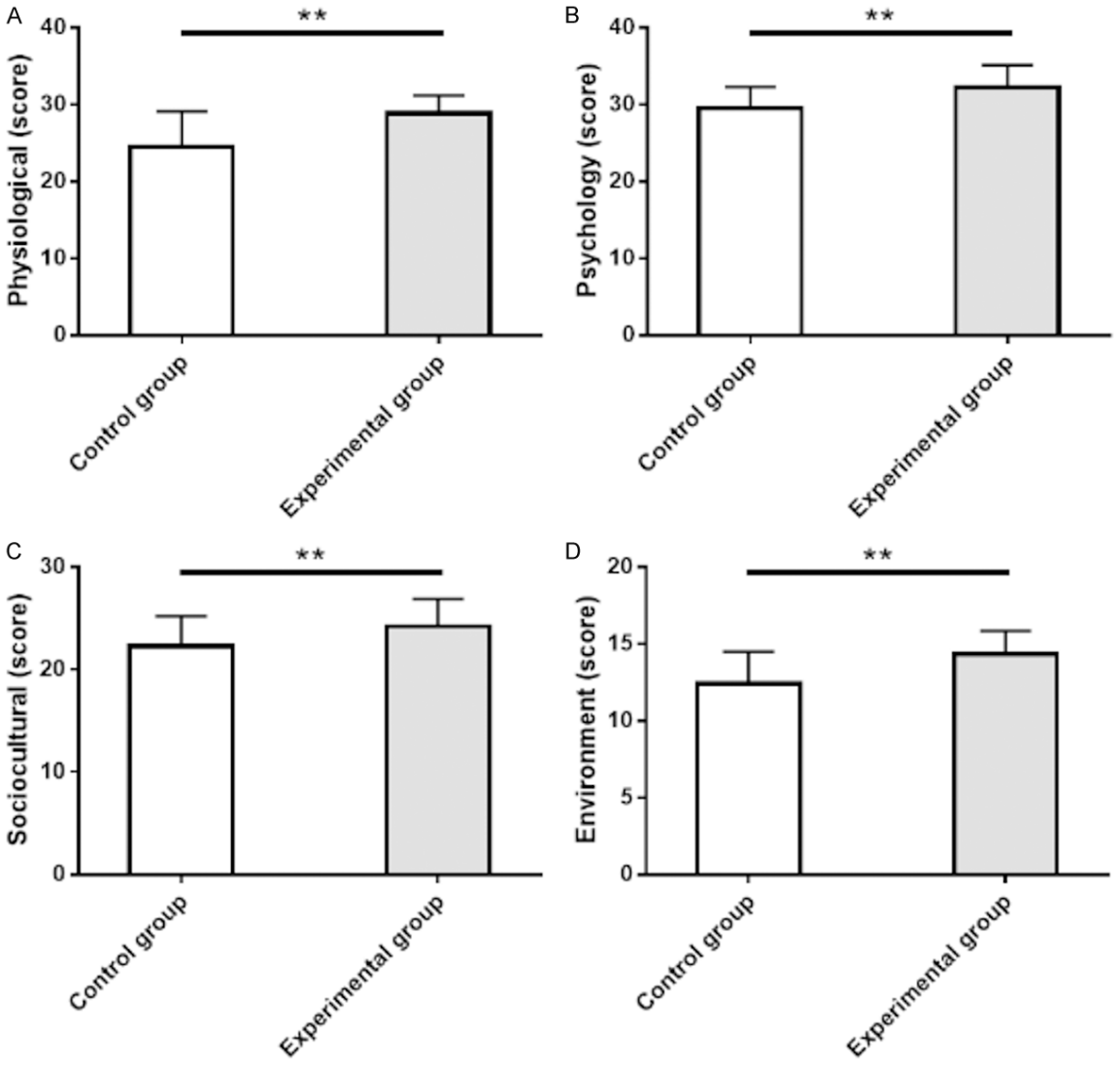

Figure 4. Comparison of GCQ scores of the two groups after care. A. Physical scores of the two groups. B. Psychospiritual scores of the two groups. C. Sociocultural scores of both groups. D. Environmental scores of both groups. Note: **P<0.01; *P<0.05. GCQ, General Comfort Questionnaire.

improvement could stem from the attentive intraoperative care provided under the humanistic model, which enables timely responses to patients' needs and effective management of severe pain [19].

Similarly, Mao et al. [20] reported significant reductions in VAS scores and improvements in quality of life metrics after six months of humanistic nursing in patients with breast cancer, paralleling our findings. In terms of alleviating negative emotions, the SAS and SDS scores in the experimental group significantly decreased post-nursing compared to pre-care levels and to those in the control group. This suggests that humanistic care effectively reduces anxiety and depression among patients undergoing outpatient gynecological surgery, outperforming routine nursing. The likely mechanism is the psychological support integral to humanistic care, allowing nursing staff to closely monitor patients' emotional states throughout the perioperative period, address their psychological needs, and actively promote self-care strategies. This comprehensive approach helps patients approach their conditions with greater confidence and tranquility [21, 22].

He et al. [23] reported that humanistic care significantly alleviates negative emotions and postoperative pain in patients with lower

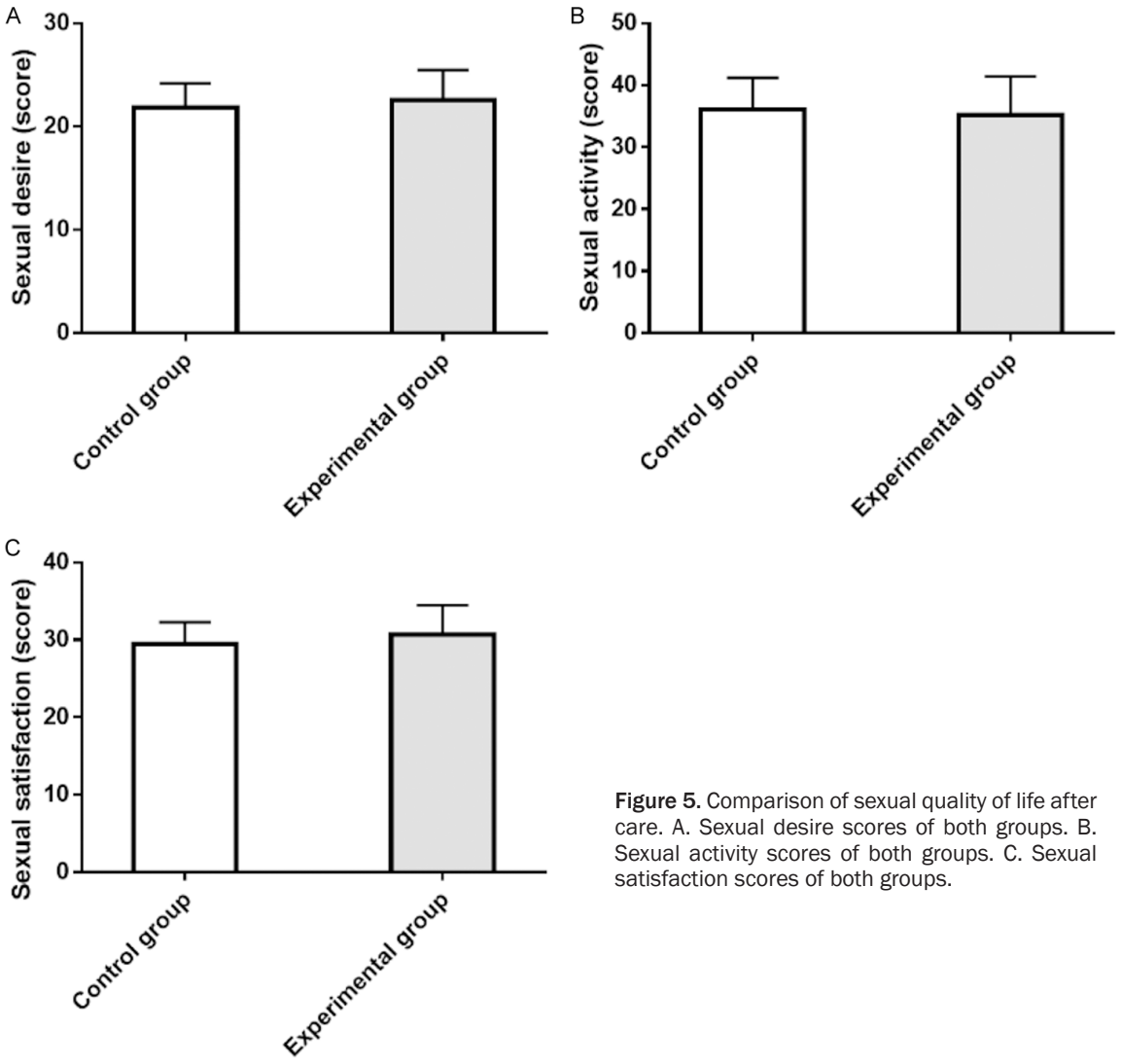

Figure 5. Comparison of sexual quality of life after care. A. Sexual desire scores of both groups. B. Sexual activity scores of both groups. C. Sexual satisfaction scores of both groups.

Table 2. Comparison of nursing quality in the two groups

Factors	Control group (n=51)	Experimental group (n=57)	χ^2	P
Nursing defects	3 (5.88)	1 (1.75)		
Nursing errors	3 (5.88)	1 (1.75)		
Nursing complaints	2 (3.92)	0 (0.00)		
Incidence	8 (15.69)	2 (3.51)	4.751	0.029

Table 3. Comparison of nursing satisfaction in the two groups

Factors	Control group (n=51)	Experimental group (n=57)	χ^2/t	P
Very satisfied	17 (33.33)	35 (61.40)		
Satisfied	25 (49.02)	20 (35.09)		
Dissatisfied	9 (17.65)	2 (3.51)		
Total satisfaction	42 (82.35)	55 (96.49)	5.882	0.015

extremity arteriosclerosis obliterans, supporting our findings. In our study, the experimental group exhibited significant advantages in the GCQ across physical, psychospiritual, sociocul-

tural, and environmental dimensions, indicating that humanistic care markedly enhances patient comfort during outpatient gynecological surgery. This improvement is likely due to the comprehensive approach taken by nursing staff in optimizing the treatment environment, providing psychological support, and applying humanistic care principles, all contributing to a more comfortable medical experience.

Regarding sexual quality of life, both the experimental and control groups showed similar scores in the BISF-W, suggesting that humanistic care does not significantly differ from routine care in impacting sexual desire, activity, and satisfaction.

In terms of nursing quality, the experimental group showed a significantly lower incidence of nursing defects, errors, and complaints, indicating an enhancement in nursing quality under humanistic care. This improvement could be attributed to effective management within the humanistic care framework, which not only ensures timely updates in theoretical knowledge and skills training for nursing staff but also boosts their initiative and engagement [24].

Zhong et al. [25] found that nurse training based on humanistic principles significantly improved nurses' adaptability, operational skills, communication abilities, self-learning, and teamwork, which in turn enhanced their problem-solving capabilities, reduced turnover intentions, and elevated nursing quality, paralleling our findings. Further analysis of nursing satisfaction revealed that the experimental group reported significantly higher satisfaction levels, underscoring the effectiveness and acceptance of the humanistic care model in outpatient gynecological settings. This is corroborated by a retrospective study that found humanistic care significantly boosted nursing satisfaction in ICU settings [26].

Additionally, Wang et al. [27] observed that humanistic care not only alleviated negative emotions and improved nursing satisfaction among patients with acute leukemia but also played a role in mitigating adverse reactions during chemotherapy, similar to our observations. The high level of nursing satisfaction observed in our study likely stems from the core principles of humanistic care, which focus on providing thorough care across diagnosis, treatment, perioperative management, and ongoing disease monitoring, continually reinforced by ongoing development of the nursing team to maintain high standards of care quality.

This study innovatively analyzes 108 patients undergoing outpatient gynecological surgery from multiple dimensions including vital signs, pain levels, negative emotions, comfort, sexual quality of life, nursing quality, and patient satisfaction, comparing the clinical benefits of humanistic care against routine nursing. It confirms that humanistic care offers substantial clinical advantages for patients undergoing outpatient gynecological surgery, making it a valuable clinical practice worthy of broader adoption. This approach provides an optimal care option for such patients and offers significant insights for management in this field.

However, the study has areas for improvement. Firstly, the omission of indicators such as self-efficacy and overall patient comfort limits a deeper understanding of how humanistic care impacts these aspects in patients undergoing outpatient gynecological surgery. Secondly, the lack of long-term follow-up data restricts the ability to track the prolonged impact of humanistic care on patient recovery. Lastly, the absence of a risk factor analysis on the quality of care and patient satisfaction prevents a comprehensive evaluation that could further refine nursing practices. Future research will aim to address these gaps.

In summary, humanistic care not only aids in stabilizing vital signs during surgery but also reduces postoperative pain, alleviates negative emotions, and enhances overall patient comfort, nursing quality, and satisfaction. This approach does not affect sexual functioning indicators but offers substantial improvements in overall patient care and outcomes. Its high value for clinical promotion underscores its potential as a transformative approach in outpatient gynecological settings.

Disclosure of conflict of interest

None.

Address correspondence to: Yunni Zhang, Department of Outpatient Nursing, The Second

Affiliated Hospital of Zhejiang University of Traditional Chinese Medicine, Hangzhou 310000, Zhejiang, China. Tel: +86-13777817864; E-mail: 13777817864@163.com

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