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Effect of Narrative Nursing Intervention on Patients with Specific Digestive Tract Malignancies (Esophageal, Gastric, and Intestinal Cancers): A Retrospective Study

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Objective: To explore the effect of narrative nursing intervention on patients with esophageal, gastric, and intestinal cancers.

Methods: A retrospective analysis was conducted on the clinical data of 103 patients with digestive tract malignant tumors admitted to our hospital from January 2022 to January 2024. According to the nursing intervention received by the patients, they were divided into a control group (n=51) and an observation group (n=52). The control group received routine nursing intervention, while the observation group received narrative nursing intervention in addition to the routine nursing intervention. The compliance behavior, negative emotional status, self-perceived burden, quality of life, and adverse reactions of the two groups were compared.

Results: After intervention, the observation group showed higher scores in medication, exercise, dietary, and emotional regulation adherence than the control group ($P<0.05$). Self-Rating Anxiety Scale (SAS) and Self-Rating Depression Scale (SDS) for negative emotions decreased in both groups, with a greater reduction in the observation group ($P<0.05$). Economic, physical, and emotional burden levels also decreased more in the observation group ($P<0.05$). Quality of life scores in physiological, social/family, emotional, and functional conditions improved more in the observation group ($P<0.05$). Adverse reactions, including nausea, vomiting, fatigue, pain, gastrointestinal reactions, and insomnia, were less frequent in the observation group than in the control group ($P<0.05$).

Conclusion: Narrative nursing intervention for patients with digestive tract malignant tumors can effectively improve patient compliance behavior, alleviate negative emotions, reduce self-perceived burden, promote the improvement of patient quality of life, and reduce the occurrence of related adverse reactions. However, the study is limited by its small sample size and single-center design, which may affect the generalizability of the findings. Further research with larger and more diverse populations is recommended.

Keywords: narrative nursing, gastrointestinal neoplasms, emotional distress, perceived burden, quality of life

Introduction

According to the *Global Cancer Statistics 2020* report, since 2020, there have been 3.57 million new cases and 2.22 million deaths from malignant digestive tract tumors, including gastric and colorectal cancers. These malignancies are characterized by high incidence and mortality rates, making them one of the leading causes of death among residents in China.[1] Treatment and disease progression related to tumors not only pose challenges to patients' physical health but also severely impact their psychological and social functioning.[2] Patients with digestive tract malignant tumors often face various problems, including treatment-related side effects, negative emotions, economic burdens, and decreased quality of life.[3]

In current clinical practice, although medical technology continues to advance, comprehensive nursing interventions addressing patients' psychological and quality of life issues remain relatively insufficient.[4] Traditional nursing models often focus on physiological management of diseases, with inadequate attention to patients' psychological and social needs.[5] Therefore, finding an effective nursing intervention that comprehensively addresses patients' psychological status, quality of life, and treatment adherence is crucial for improving overall disease resistance and promoting recovery.

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Narrative nursing, as an emerging nursing model, emphasizes understanding patients' conditions, needs, and experiences through their own narratives, thereby providing personalized, comprehensive nursing care.[6] Compared to traditional nursing approaches, narrative nursing pays more attention to patients' subjective feelings and psychological needs, helping them better cope with the challenges of illness, and improve their quality of life and mental health.[7] The application of narrative nursing in disclosing diagnoses to patients with non-small cell lung cancer can holistically improve prognosis, enhance patients' cognitive function, and strengthen nurse-patient relationships, its application and effectiveness in patients with digestive tract malignant tumors have not been fully explored. Therefore, this study aims to explore the role and effectiveness of narrative nursing intervention in patients with digestive tract malignant tumors, with the hope of providing more reference and guidance for clinical practice, and improving the overall nursing quality and quality of life for patients. To measure the outcomes effectively, validated scales, including the Compliance Behavior Questionnaire, Self-Rating Anxiety Scale (SAS), and Self-Rating Depression Scale (SDS), were selected to quantitatively assess the impact of the intervention.

Materials and Methods

Population and Sample

A retrospective analysis was conducted on the clinical data of 103 patients with digestive tract malignant tumors admitted to our hospital from January 2022 to January 2024. Inclusion criteria:① All cases were pathologically diagnosed as digestive tract malignant tumors; ② Patients aged ≥18 years, gender unrestricted; ③ Estimated survival period of patients > 8 months; ④ Patients without drug, alcohol dependence, etc.; ⑤ Patients with clear consciousness, no language communication, cognitive, and writing disorders; ⑥ Clinical data of patients were complete and available for analysis. Exclusion criteria: ① Severe organ dysfunction; ② Complicated with severe cardiovascular and cerebrovascular diseases; ③ Complicated with severe infections, endocrine disorders, malignant tumors, etc.; ④ Existence of immune function, coagulation hematopoietic dysfunction; ⑤ Existence of mental illness; ⑥ Allergic reactions or related contraindications to the treatment and intervention methods adopted in this study; ⑦ Unable to fully cooperate with this study for various reasons. Patients were divided into a control group (n=51) and an observation group (n=52) based on the type of nursing intervention received. The control group received conventional nursing care, while the observation group received narrative nursing intervention. Grouping was based solely on the type of nursing intervention, without consideration of other factors or patient characteristics, to ensure that differences in outcomes were primarily attributable to the nursing approach.

Methods

The control group received routine nursing interventions, including basic condition observation, symptomatic medication treatment, nursing for related symptoms and complications, daily care, disease recovery guidance, and follow-up after discharge. Additionally, nursing staff provided psychological counseling and comfort according to the patient's condition. The observation group received narrative nursing intervention in addition to routine nursing interventions provided to the control group. This mainly involved integrating the concept of humanistic care nursing into routine clinical nursing work. By listening to the patient's experiences, identifying hidden information, externalizing problems, finding positive aspects of life, reconstructing cognition, enhancing willpower, and promoting mental growth. The specific measures of narrative nursing were as follows: ① Two experienced psychiatric nurses, each with over five years of experience and formally trained in narrative nursing, served as primary nurses. They established communication with patients to understand their inner world by encouraging them to share personal stories and fully express their feelings and wishes. During these sessions, the nurses recorded details of each patient's medical history, treatment experiences, understanding of their illness, and relevant work, social, and family contexts. Each patient received narrative nursing sessions at least three times per week, with each session lasting 5–8 minutes. The primary nurses maintained individual work logs to track each patient's condition and emotional changes and promptly shared these updates with the attending physician. ② Listening to the patient's story to convey warmth and care: Patients can release inner confusion and pain through storytelling, soothing emotions. Nurses allowed patients to vent by listening. When patients encountered difficulties, nurses could at

least accompany them, making them feel supported by friendship and family love. Through listening and encouragement, nurses could enhance their service awareness and nursing capabilities, establish a harmonious and trusting partnership with patients, and convey warmth and care. ③ Providing psychological counseling to alleviate patient's psychological barriers: For patients whose condition did not improve as expected, nurses used various narrative methods such as storytelling, WeChat videos, music sharing, etc., to help them control their emotions and maintain a positive and optimistic attitude. Encouraging patients to actively participate in social activities and live a meaningful life helps them feel the dignity and meaning of life. These measures help alleviate the patient's sense of loss and enable them to better face the final moments of life. ④ Reshaping cognition, guiding patients to actively cooperate with treatment: Hospitalized patients often need to undergo various examinations and tests, such as CT scans, MRI, and endoscopy. Some patients may not fully understand these medical orders and may even consider these tests as unnecessary expenses, thus unwilling to cooperate with treatment. Nurses need to patiently explain to patients the necessity of each examination and the importance for diagnosis and treatment, encouraging them to actively cooperate with the treatment plan. ⑤ Using the subtle influence of psychology to teach patients to find satisfaction in recovery: Cancer patients often worry that their illness will cause psychological distress to their families, and may even feel like a burden to their families. Nurses need to convey hope to patients, informing them that cancer is a treatable chronic disease, and help them build confidence. By emphasizing the positive aspects of treatment progress, nurses guide patients to re-examine their lives, reshape their life stories, and find satisfaction and hope from them. ⑥ Establishing a network of family support to increase patients' psychological support: Some terminal patients may not have family members accompanying them in the hospital, which can exacerbate their psychological burden. Nursing staff need to listen to the patient's troubles and experiences, understand their personal situation and family background, and inject humanistic care into the nursing process. Nurses can contact the patient's relatives and friends, encourage family members to actively participate in nursing, and provide psychological and financial support. This care and support help patients better cope with the disease and treatment process. Narrative nursing was administered once a week as a single course, for a total of four courses. The observation period for both groups was 4 weeks.

The narrative nursing interventions were adapted to each patient's unique circumstances, incorporating a humanistic care approach that emphasized listening, empathy, and individualized support. Nurses used structured prompts to guide discussions around patients' personal stories and disease perceptions. Specific examples included: engaging patients to reflect on life values during storytelling, employing mindfulness techniques to assist with emotional regulation, and involving family members to establish stronger support networks. No standardized tools were used, allowing nurses to tailor each session to the patient's comfort level and communication style.

Data Collection Instruments

1. Compliance Behavior: Before and after the intervention, the compliance behavior of patients was assessed using a Compliance Behavior Questionnaire,[8] which consists of 7 dimensions and 20 items, with a total score ranging from 0 to 20 points. In this study, the dimensions of medication adherence, exercise adherence, dietary adherence, and emotional regulation adherence were evaluated to assess patient compliance behavior, with higher scores indicating better compliance.
2. Negative Emotional State:[9] Before and after the intervention, the level of anxiety was assessed using the Self-Rating Anxiety Scale (SAS), which has a total score of 100 points and a cut-off value of 50 points. Lower scores indicate lower levels of anxiety. The level of depression was assessed using the Self-Rating Depression Scale (SDS), which also has a total score of 100 points and a cut-off value of 53 points. Lower scores indicate lower levels of inner depressive emotions in patients.
3. Self-Perceived Burden: Before and after the intervention, the Self-Perceived Burden Scale (SPB)[10] was used to assess the self-perceived burden of patients. This scale includes three dimensions: economic burden, physical burden, and emotional burden, with 10 items and scores ranging from 10 to 50 points. Higher scores indicate a heavier self-perceived burden.
4. Quality of Life: Before and after the intervention, the Functional Assessment of Cancer Therapy-General (FACT-G)[11] was used to assess the quality of life of patients. This scale includes four dimensions: physical condition,

social/family condition, emotional condition, and functional condition, with 27 items and scores ranging from 0 to 135 points. Higher scores indicate a better quality of life.

5. Adverse Reactions: The occurrence of adverse reactions during chemotherapy was recorded and graded according to the National Cancer Institute Common Toxicity Criteria (NCI-CTC) version 5.0.[12]

Data Analysis

GraphPad Prism 8 was used for graphing, and SPSS 20.0 was used for data analysis. Descriptive statistics for continuous data were expressed as ($\bar{x}\pm$ S), and analyzed using *t*-tests. Descriptive statistics for categorical data were expressed as n (%), and analyzed using chi-square tests. A value of $P < 0.05$ indicates statistical significance.

Ethical Considerations

This study was approved by the ethics committee of Beijing Ditan Hospital affiliated to Capital Medical University. Informed consent was obtained from all study participants. All the methods were carried out in accordance with the Declaration of Helsinki.

Results

Comparison of Basic Characteristics Between the Two Patient Groups

Comparison of general characteristics, including gender composition, age, course of illness, and disease type, between the two groups showed no statistically significant differences ($P > 0.05$), indicating comparability. See Table 1.

Comparison of Compliance Behavior

After the intervention, the observation group showed higher levels of medication adherence, exercise adherence, dietary adherence, and emotional regulation adherence compared to the control group ($P < 0.05$), as shown in Table 2.

Table 1 Comparison of Basic Information [$\bar{x}\pm$ S, n (%)]

	Control (n=51)	Observation (n=52)	t/χ^2	P
Sex	–	–	0.466	0.494
Male	27 (52.94)	31 (59.62)	–	–
Female	24 (47.06)	21 (40.38)	–	–
Age (years)	47.85±4.13	48.62±4.43	0.912	0.363
Course of Illness (years)	4.37±1.09	4.52±1.14	0.682	0.496
Disease Type	–	–	0.027	0.868
Esophageal Cancer	13 (25.49)	14 (26.92)	–	–
Gastric Cancer	18 (35.29)	19 (36.54)	–	–
Intestinal Cancer	20 (39.22)	19 (36.54)	–	–

Table 2 Comparison of Compliance Behavior ($\bar{x}\pm$ S, Points)

Compliance Behavior	Control (n=51)	Observation (n=52)	t	P
Medication Adherence	1.98±0.34	2.43±0.37	6.423	<0.001
Exercise Adherence	1.82±0.31	2.56±0.28	12.718	<0.001
Dietary Adherence	1.85±0.29	2.54±0.33	11.263	<0.001
Emotional Regulation	1.91±0.27	2.49±0.35	9.403	<0.001

Comparison of Negative Emotional States

As shown in Figure 1, the SAS scores and SDS scores of both groups decreased after the intervention compared to before the intervention, with a greater magnitude of change observed in the observation group ($P < 0.05$). Before the intervention, the Self-Rating Anxiety Scale (SAS) scores for the observation group and control group were 58.12±6.24 and 57.72±6.35, respectively, with no significant difference between the groups ($P > 0.05$). After the intervention, the SAS scores decreased in both groups, with the observation group scoring 44.82±4.67 and the control group scoring 50.87 ±5.06; this difference was statistically significant ($P < 0.05$). Similarly, the Self-Rating Depression Scale (SDS) scores for the observation and control groups were 55.04±5.93 and 53.85±5.87 before the intervention, respectively, showing no significant difference ($P > 0.05$). Post-intervention, the SDS scores decreased to 40.87±4.69 in the observation group and 47.62±5.11 in the control group, with the difference between groups reaching statistical significance ($P < 0.05$).

Comparison of Self-Perceived Burden

As depicted in Figure 2, the levels of economic burden, physical burden, and emotional burden in both groups decreased after the intervention compared to before the intervention, with a greater magnitude of change observed in the observation group ($P < 0.05$). Before the intervention, the economic burden scores for the observation group and control group were 8.41 ± 1.26 and 8.26 ± 1.24, respectively, with no significant difference between the groups ($P > 0.05$). After the intervention, economic burden scores decreased in both groups, with the observation group scoring 5.64 ± 1.43 and the control group scoring 6.87 ± 1.15; this difference was statistically significant ($P < 0.05$).

Similarly, the physical burden scores for the observation and control groups were 13.56 +1.32 and 13.19 ± 1.46 before the intervention, showing no significant difference ($P > 0.05$). Post-intervention, physical burden scores decreased to 9.17 ± 1.48 in the observation group and 11.14 ± 1.54 in the control group, with the difference between groups reaching statistical significance ($P < 0.05$).

For emotional burden, scores before intervention were 22.17 ± 2.23 in the observation group and 21.86 ± 2.27 in the control group, showing no significant difference ($P > 0.05$). After the intervention, emotional burden scores dropped to 12.98 ± 3.06 in the observation group and 19.67 ± 2.15 in the control group, with a statistically significant difference between the groups ($P < 0.05$).

Comparison of Quality of Life

As illustrated in Figure 3, the scores for physiological condition, social/family status, emotional status, and functional status increased after the intervention compared to before the intervention, with a greater magnitude of change observed in the observation group ($P < 0.05$). Before the intervention, the physiological condition scores for the observation group and control group were 13.48 ± 4.32 and 13.26 ± 4.85, respectively, showing no significant difference ($P > 0.05$). After the intervention, the physiological condition scores increased in both groups, with the observation group scoring 20.36 ± 2.98 and the control group scoring 17.75 ± 4.21, a statistically significant difference ($P < 0.05$).

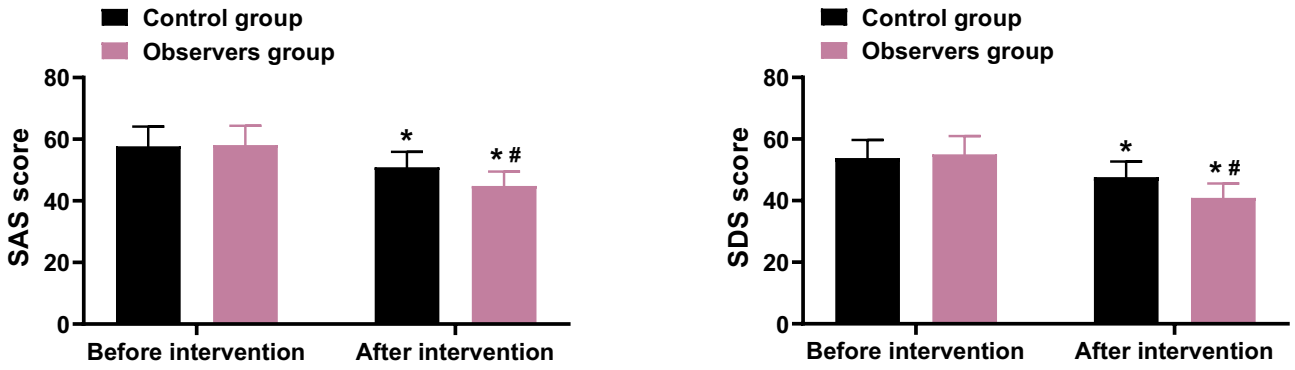

Figure 1 Comparison of Negative Emotional States ($\bar{x}\pm S$, points).
Notes: *$P < 0.05$ compared to before treatment; #$P < 0.05$ between groups.

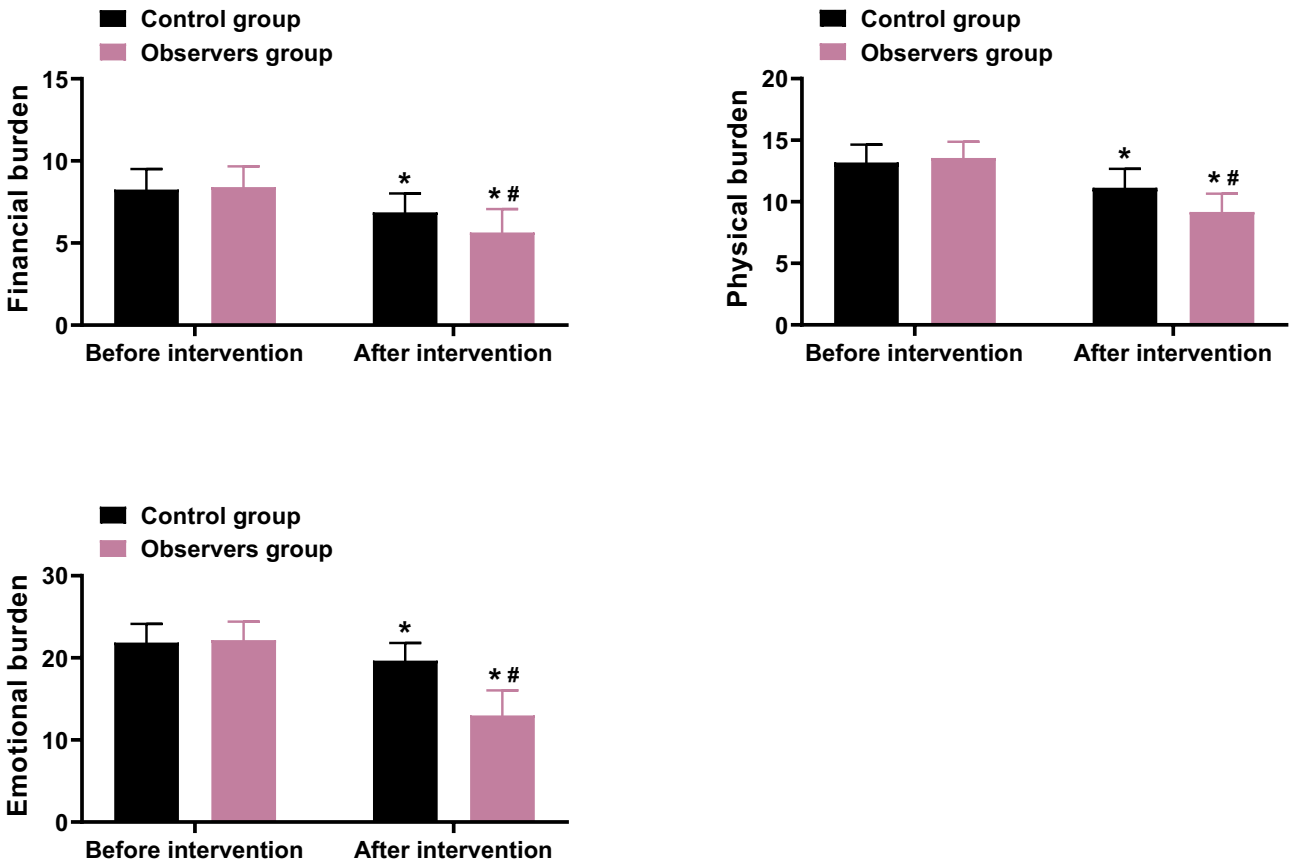

Figure 2 Comparison of Self-Perceived Burden ($\bar{x} \pm S$, points).
Notes: *P < 0.05 compared to before treatment; #P < 0.05 between groups.

For social/family status, scores before the intervention were 16.04 ± 4.43 in the observation group and 16.69 ± 3.78 in the control group, with no significant difference (P > 0.05). After the intervention, scores rose to 21.67 ± 2.69 in the observation group and 19.98 ± 3.72 in the control group, with the difference being statistically significant (P < 0.05).

In terms of emotional status, the observation and control groups had scores of 14.79 ± 3.85 and 15.13 ± 3.46 before the intervention, respectively, showing no significant difference (P> 0.05). Post-intervention, emotional status scores increased to 24.92 ± 3.27 in the observation group and 18.52 ± 2.89 in the control group, with the difference between the groups reaching statistical significance (P < 0.05).

For functional status, the scores were 9.07 ± 4.11 in the observation group and 8.36 ± 4.45 in the control group before the intervention, with no significant difference (P > 0.05). After the intervention, scores increased to 16.74 ± 4.52 in the observation group and 10.97 +3.98 in the control group, with the difference being statistically significant (P < 0.05).

Comparison of Adverse Reactions

The occurrence rates of adverse reactions such as nausea and vomiting, fatigue, pain, gastrointestinal reactions, and insomnia were lower in the observation group compared to the control group (P < 0.05), as shown in Table 3.

Discussion

Malignant tumors of the digestive system refer to malignant tumors that occur in the digestive tract, including the esophagus, stomach, intestines, liver, pancreas, and other parts. These tumors are formed due to abnormal cell growth and division, sometimes spreading to surrounding tissues and organs, and even to distant parts, posing a serious threat to patients' health. Among all malignant tumor diseases, malignant tumors of the digestive system have high incidence and mortality rates.[13] Some diseases, such as gastric cancer and colorectal cancer, have a very poor prognosis, posing

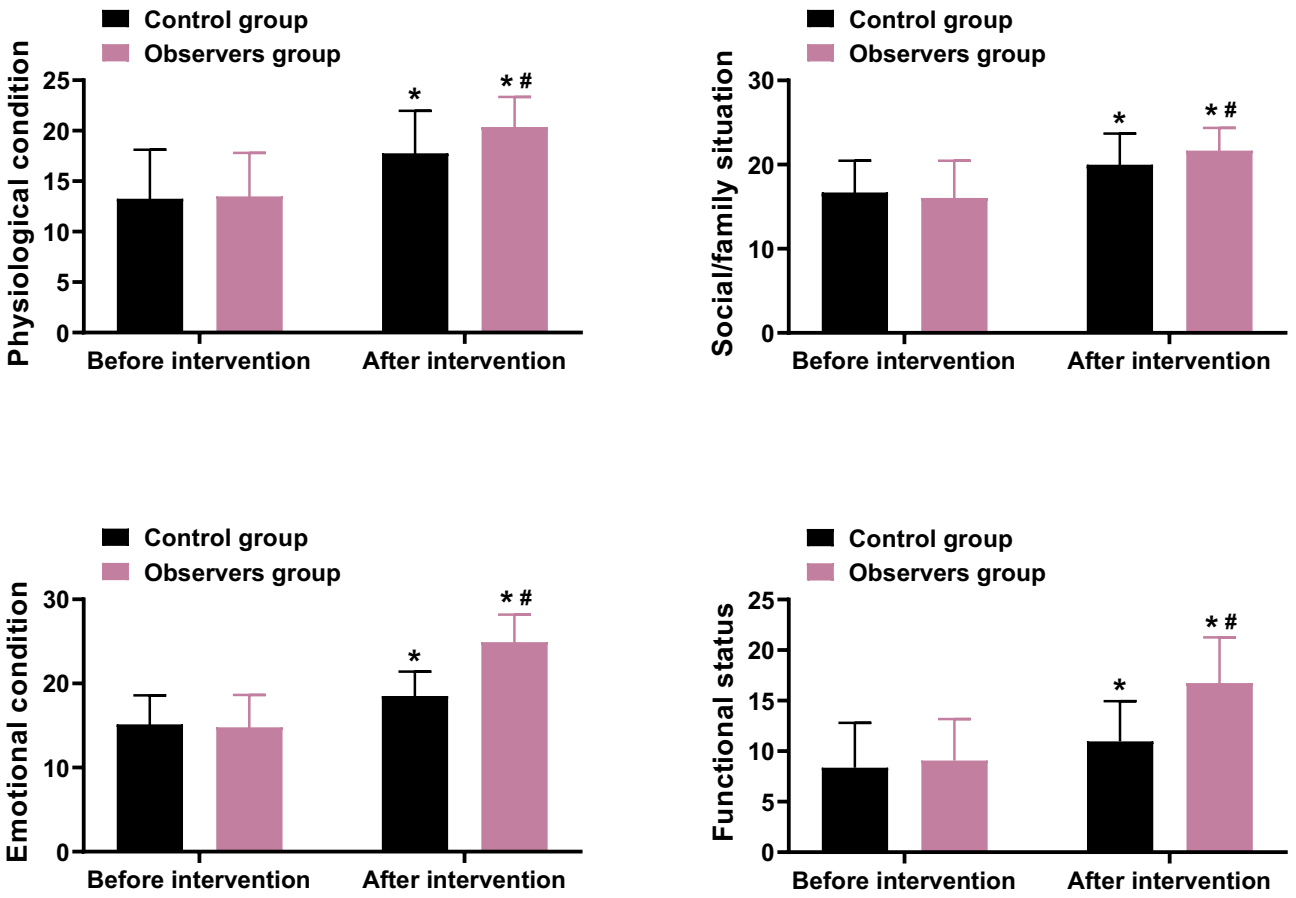

Figure 3 Comparison of Quality of Life ($\bar{x} \pm S$, points).
Notes: *P < 0.05 compared to before treatment; #P < 0.05 between groups.

significant challenges to the quality of life of patients. Patients with malignant tumors of the digestive system have complex and diverse symptoms and often suffer from the torment of the disease. For example, gastric cancer is often accompanied by abdominal pain, bloating, vomiting, and even severe hematemesis or melena;[14] Intestinal cancer can cause refractory ascites, making it difficult for patients to eat and endure physical and mental torment for a long time.[15] In addition, the psychological distress of patients with malignant tumors of the digestive system cannot be ignored. They may feel depressed due to fear of the disease, uncertainty, and worries about the future.[16] Moreover, physical discomfort and side effects during treatment, as well as the impact on social and family relationships, may also exacerbate their psychological burden.[17] This psychological distress may manifest as anxiety, depression, fear, anger, loneliness, and self-doubt, making patients feel helpless and unable to control the progression of the disease. They also worry about their impact on family and society, as well as the economic burden and deterioration of quality of life. Providing effective

Table 3 Comparison of Adverse Reactions [n (%)]

Adverse Reaction	Control (n=51)		Observation (n=52)		χ^2	P
	≥3 Grade	Total	≥3 Grade	Total		
Nausea and Vomiting	5 (9.80)	27 (52.94)	3 (5.77)	14 (26.92)	7.274	0.007
Fatigue	4 (7.84)	23 (45.10)	2 (3.85)	11 (21.15)	6.675	0.009
Pain	4 (7.84)	28 (54.90)	1 (1.92)	16 (30.77)	6.128	0.013
Gastrointestinal Reactions	3 (5.88)	25 (49.02)	1 (1.92)	12 (23.08)	7.528	0.006
Insomnia	4 (7.84)	20 (39.22)	2 (3.85)	9 (17.31)	6.109	0.013

psychological support and therapy is crucial to alleviate patients' psychological distress.[18] Establishing a positive psychological coping mechanism helps patients better cope with the challenges of the disease, improve their mental health, and enhance their quality of life. Narrative nursing is a nursing model centered on the "biopsychosocial" concept, emphasizing humanistic care and the subjective initiative of participants.[19] It is not only the application of technology but also a humanistic sentiment, providing new ideas and methods for improving clinical treatment and nursing quality.

The results of this study showed that the observation group had higher scores in medication adherence, exercise adherence, dietary adherence, and emotional regulation compared to the control group ($P < 0.05$). The SAS and SDS scores of the observation group after intervention were lower than those of the control group ($P < 0.05$). There are commonalities between the results of this study and previous related studies, Hsu et al[20] evaluated the quality of life of patients with esophageal malignant tumors before and after the implementation of narrative nursing. It was found that narrative nursing played a positive role in reducing the psychological pain of patients, alleviating the impact of negative emotions on patients, and then improving the quality of life of patients. This is consistent with the results of this study. At the same time, Paul et al[21] research shows that narrative nursing can not only improve the clinical symptoms of cancer patients, but also has a significant positive feedback effect on their quality of life and nursing satisfaction. Suggesting that the use of narrative nursing intervention for patients with digestive system malignant tumors can effectively improve their adherence to medical treatment and alleviate negative emotions. The reasons for this may lie in narrative nursing guiding patients to narrate their personal stories, allowing them to express emotions and release stress, thereby helping patients alleviate suffering. By listening to patients' stories, sharing family anecdotes, and displaying patients' stories of fighting illness on the ward bulletin board, narrative nursing encourages and inspires patients and others. Narrative nursing combines nursing techniques with humanistic care, allowing nurses to get closer to patients, understand their needs, and alleviate their suffering. The implementation of narrative nursing makes patients feel respected, enabling them to express true emotions, reduce psychological burden, boost morale and confidence, thus improving adherence to medical treatment and emotional status.[22,23]

In terms of self-perceived burden and quality of life, the results of this study show that the levels of economic burden, physical burden, and emotional burden in the observation group after intervention were lower than those in the control group, and the scores of physiological condition, social/family status, emotional status, and functional status were higher than those in the control group ($P < 0.05$). This indicates that the use of narrative nursing intervention for patients with digestive system malignant tumors can effectively alleviate the self-perceived burden of patients and improve their quality of life. The reason for this may lie in the fact that patients with digestive system malignant tumors often need to rely on the care of others during hospitalization, which may bring many concerns to the patients themselves and their caregivers, such as financial burden, physical exhaustion, and psychological pressure. Narrative nursing, through face-to-face communication with patients, listening to their voices, and sharing their life stories, can alleviate these burdens, making patients feel more understood and supported. In addition, narrative nursing can also help patients establish more social connections, enhance their social support network, thereby improving their quality of life and psychological security. In terms of safety, the occurrence rate of adverse reactions such as nausea and vomiting, fatigue, pain, gastrointestinal reactions, and insomnia in the observation group was lower than that in the control group ($P < 0.05$), confirming that implementing narrative nursing intervention for patients with digestive system malignant tumors can effectively reduce the occurrence of related adverse reactions in patients. The reason for this may be related to the transformation of patients' cognition and inner emotions, which promotes adherence to medical treatment and improves quality of life. Furthermore, uncontrolled confounding factors in this study, such as socioeconomic status and family support, may have influenced the intervention outcomes. Due to data limitations, we were unable to conduct an in-depth analysis of how these factors specifically affected adherence, psychological burden, and quality of life. Therefore, we recommend that future studies consider these variables to better understand their potential role in the effects of narrative nursing interventions.

Conclusion

Compared to conventional nursing care, the application of narrative nursing can effectively improve adherence to medical treatment, ameliorate negative emotions, alleviate self-perceived burden, promote the enhancement of quality

of life, and reduce the occurrence of adverse reactions in patients with digestive system malignant tumors. However, it is important to note that this study still has some limitations that need to be addressed, such as: ① Small sample size: The relatively small sample size covered in this study may affect the credibility and applicability of the research. Additionally, a small sample size may limit the statistical significance of certain results, leading to potential biases. ② Study design and center limitations: This study adopted a retrospective analysis and was conducted only in a single hospital. Retrospective analysis designs carry the risk of information bias and treatment selection bias, while single-center studies may restrict the external applicability of the research findings. ③ Inadequate consideration of individual differences: This study did not adequately consider individual differences among patients, such as lifestyle and dietary habits, basic health conditions, and other factors, which may have influenced the intervention outcomes. Therefore, in future research, we will increase the sample size, improve the study design, and pay more attention to potential influencing factors to further enhance the credibility and comprehensiveness of the research. Clinically, this study underscores the potential of narrative nursing as a valuable addition to traditional cancer care, emphasizing patient-centered and humanistic approaches that could enhance patient engagement and psychological well-being lay a solid foundation for creating a positive nurse-patient relationship atmosphere.

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Disclosure

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