Journal of Clinical and Nursing Research, 2026, Volume 10, Issue 5
http://ojs.bbwpublisher.com/index.php/JCNR
Online ISSN: 2208-3693
Print ISSN: 2208-3685

# Analysis of the Application Value of Integrated Psychological Nursing Combined with Continuous Enteral Nutrition Nursing in Patients with Gastrointestinal Tumors Undergoing Chemotherapy

**Ying Zhou, Yijia Kong***

Taizhou Second People's Hospital, Taizhou 225500, Jiangsu, China

***Author to whom correspondence should be addressed.***



**Abstract:** *Objective*: To evaluate the nursing effects of integrated psychological nursing combined with continuous enteral nutrition nursing in patients with gastrointestinal tumors undergoing chemotherapy. *Methods*: A total of 74 patients with gastrointestinal tumors admitted for chemotherapy from November 2023 to November 2025 were selected and equally divided into two groups using a randomization method. The experimental group received integrated psychological nursing combined with continuous enteral nutrition nursing, while the reference group received conventional nursing. Psychological scores, nutritional indicators, immune function indicators, and fatigue severity scores were compared between the two groups. *Results*: After nursing, the psychological scores and fatigue severity scores in the experimental group were lower than those in the reference group, while nutritional indicators and immune function indicators were higher in the experimental group ($p < 0.05$). *Conclusion*: Implementing integrated psychological nursing combined with continuous enteral nutrition nursing in patients with gastrointestinal tumors undergoing chemotherapy can improve their negative psychological states, adjust nutritional status, enhance immunity, and reduce fatigue severity.

**Keywords:** Integrated psychological nursing; Continuous enteral nutrition nursing; Gastrointestinal tumors; Chemotherapy

**Online publication:** May 31, 2026

## 1. Introduction

Gastrointestinal tumors, commonly including colorectal cancer and gastric cancer, are highly malignant and continuously damage the digestive system, leading to systemic symptoms [1]. Chemotherapy is a common

treatment for this disease, which can eliminate cancer cells, delay tumor progression, and thereby prolong patient survival. However, chemotherapy drugs can easily cause adverse reactions such as nausea, vomiting, or fatigue, increasing the psychological burden on patients and leading to negative emotions such as anxiety or depression. Therefore, integrated psychological nursing can be provided to these patients, employing multifaceted and diversified psychological nursing measures to improve their psychological states and meet their nursing needs at multiple levels, including psychological and spiritual aspects. Additionally, gastrointestinal reactions can affect patients' appetite, leading to issues such as malnutrition, necessitating the combination of enteral nutrition to deliver nutrients into the gastrointestinal tract and improve nutritional status [2]. Continuous enteral nutrition nursing involves scientifically administered enteral nutrition in a home environment, offering advantages of simplicity, efficiency, and safety. Based on this, this study selected 74 patients with gastrointestinal tumors to evaluate the intervention effects of integrated psychological nursing combined with continuous enteral nutrition nursing.

## 2. Materials and methods

### 2.1. General information

A total of 74 patients with gastrointestinal tumors who were admitted for chemotherapy between November 2023 and November 2025 were selected and randomly divided into two equal groups. The experimental group consisted of 37 patients, including 21 males and 16 females, aged between 32 and 75 years, with a mean age of (57.68 ± 4.19) years. The types of tumors were as follows: 14 cases of gastric cancer, 17 cases of colorectal cancer, and 6 cases of esophageal cancer. The reference group also consisted of 37 patients, including 22 males and 15 females, aged between 31 and 77 years, with a mean age of (57.81 ± 4.23) years. The types of tumors were as follows: 13 cases of gastric cancer, 17 cases of colorectal cancer, and 7 cases of esophageal cancer. Comparisons of data between the two groups showed $p > 0.05$.

#### 2.1.1. Inclusion criteria

Clinically diagnosed with gastrointestinal tumors; meeting the indications for chemotherapy; having normal communication abilities; having relatively complete basic information; being fully informed about the study.

#### 2.1.2. Exclusion criteria

Having other malignant tumors; having blood system diseases; having cognitive dysfunction; being allergic to chemotherapy drugs; having difficulty eating normally; having contraindications to enteral nutrition; withdrawing from the study midway.

### 2.2. Methods

The reference group received routine care: Nursing staff comprehensively explained chemotherapy knowledge to patients, including the mechanism of action of chemotherapy drugs, matters requiring cooperation during chemotherapy, and expected therapeutic effects. They assessed the patients' psychological states, patiently answered their inner doubts, and guided patients in deep breathing exercises to improve negative emotions. They demonstrated the key points of enteral nutrition operations, emphasized the precautions for home enteral nutrition, and provided targeted guidance for patients' nursing deficiencies. The experimental group received integrated psychological care + enteral nutrition continuation care.

### 2.2.1. Integrated psychological care

(1) Emotional support

Organize an emotional salon once a week in the outpatient department or community, inviting nursing staff, clinicians, and patients to participate together. Each session lasts 30 minutes, during which patients raise questions and express their doubts about chemotherapy or the disease, and healthcare professionals provide targeted answers. Successful cases share nursing experiences and discuss precautions for daily care to serve as role models. Patients are invited to join a WeChat group, with nursing staff serving as group administrators. Patients are encouraged to share their experiences and actively raise nursing questions in the group daily. Fellow patients can freely answer, and finally, the group administrator summarizes and answers the questions uniformly.

(2) Cognitive-behavioral intervention

Use ABC theory for nursing, where A represents the triggering event, B represents the patient's views and inner beliefs about the event, and C represents the behavioral and emotional responses to the event. Communicate face-to-face with patients to assess their views on chemotherapy, understand their daily nursing behaviors and emotional states, and deeply analyze the causes of negative emotions. Provide interventions such as language counseling or interest cultivation to correct their erroneous beliefs and behaviors. Each nursing session lasts 30 minutes and is conducted once a week.

(3) Relaxation training

Guide patients in mindfulness meditation training. In a home environment, play soft music, assume a comfortable posture, fully relax the body and mind, and imagine past pleasant experiences or unforgettable scenes, or look forward to future life. Use telephone follow-ups or WeChat private chats to conduct Morita therapy for patients, guiding them to face up to the tumor condition and side effects of chemotherapy, minimize rejection or avoidance behaviors, learn to accept the present, and coexist with the pathological state.

### 2.2.2. Enteral nutrition continuation care

(1) Nutritional status assessment

Based on nutritional assessment criteria, screen patients' current nutritional risks and reasonably formulate specific pathways for nutritional support, including tube feeding and oral enteral nutrition, according to their gastrointestinal function and nutrient requirements.

(2) Formulation of enteral nutrition plans

Nutritionists comprehensively assess patients' tolerance to enteral nutrition and reasonably determine the type of nutritional preparations and the dosage per meal. Continuously monitor patients' various nutritional indicators.

(3) Health education

Explain enteral nutrition knowledge during chemotherapy through various forms such as knowledge lectures, micro-video playback, and promotional brochures, including common nutritional preparations for enteral nutrition, the feasibility of plans, and nursing points for enteral nutrition. If oral medication is used, scientifically select the oral dosage and specific concentration of nutritional preparations. If tube feeding is used, demonstrate the scientific preparation method of nutritional preparations and the process of flushing the tube.

(4) Prevention of adverse reactions

For patients receiving nasal nutrition, effectively fix the nasointestinal tube. Before and after infusing nutritional preparations, flush the tube with warm water (20 mL) and then seal it. Flush the tube twice a week with sodium bicarbonate (20 mL) and assess the patency of the catheter. During the infusion of nutritional preparations, start with a slow speed and small dosage and gradually increase the infusion speed and dosage. Usually, the hourly infusion volume of the suspension is 10–20 mL, and the speed can be increased if there is no discomfort.

(5) Online follow-up

Establish a WeChat group and regularly explain enteral nutrition knowledge in the group every week, answer patients' doubts about enteral nutrition, and provide dietary guidance.

### 2.3. Observation indicators

(1) Psychological scores

The Self-Rating Anxiety Scale and Self-Rating Depression Scale were selected, with standard scores of 50 and 53, respectively. Anxiety and depression levels were positively scored.

(2) Fatigue level

The Cancer Fatigue Scale (CFS) was used, including physical fatigue (7 items), emotional fatigue (4 items), and cognitive fatigue (4 items). Each item was scored from 0 to 4, with a total score of 60. The fatigue level was positively scored.

(3) Nutritional indicators

Before nursing and 2 weeks after nursing, venous blood (5 mL, fasting) was collected. After centrifugation, the supernatant was taken to evaluate indicators such as hemoglobin (Hb), serum albumin (ALB), and serum total protein (TP) using an immunobiochemical analyzer.

(4) Immune function indicators

At the same time, venous blood (5 mL, fasting) was collected. After centrifugation, the plasma was separated to evaluate immunoglobulin G (IgG) and IgA using the enzyme-linked immunosorbent assay.

### 2.4. Statistical analysis

Data were processed using SPSS 28.0 software. Measurement data were compared using *t*-tests, and count data were compared using $\chi^2$ tests. Statistical significance was set at $p < 0.05$.

## 3. Results

### 3.1. Comparison of psychological scores between the two groups

The psychological scores of the experimental group were lower after nursing, with $p < 0.05$ between the two groups. See **Table 1**.

**Table 1.** Comparison of psychological scores between the two groups [$\overline{x} \pm$ s, points]

| Group | Number of cases | Anxiety | | Depression | |
|---|---|---|---|---|---|
| | | Before care | After care | Before care | After care |
| Experimental group | 37 | 53.98 ± 4.15 | 23.59 ± 2.74 | 52.45 ± 4.78 | 27.19 ± 2.65 |
| Reference group | 37 | 53.81 ± 4.24 | 28.96 ± 2.91 | 52.41 ± 4.80 | 31.19 ± 2.71 |

| | | | | | |
|---|---|---|---|---|---|
| t | | 0.174 | 8.172 | 0.036 | 6.419 |
| p | | 0.862 | 0.000 | 0.971 | 0.000 |

## 3.2. Comparison of fatigue level between the two groups

The fatigue level score of the experimental group was lower after nursing, with a significant difference between the two groups ($p < 0.05$). See **Table 2**.

**Table 2.** Comparison of fatigue level between the two groups [$\overline{x} \pm s$, points]

| Group | Number of cases | Physical Fatigue | | Emotional fatigue | | Cognitive fatigue | |
|---|---|---|---|---|---|---|---|
| | | Before care | After care | Before care | After care | Before care | After care |
| Experimental group | 37 | 17.65 ± 2.45 | 10.15 ± 1.57 | 10.53 ± 1.78 | 4.16 ± 1.05 | 9.87 ± 1.56 | 4.05 ± 1.13 |
| Reference group | 37 | 17.61 ± 2.49 | 14.16 ± 1.62 | 10.56 ± 1.81 | 6.19 ± 1.08 | 9.89 ± 1.61 | 6.17 ± 1.16 |
| t | | 0.070 | 10.812 | 0.072 | 8.198 | 0.054 | 7.963 |
| p | | 0.945 | < 0.001 | 0.943 | < 0.001 | 0.957 | < 0.001 |

## 3.3. Comparison of nutritional indicators between the two groups

The nutritional indicators of the experimental group increased after nursing, with a significant difference between the two groups ($p < 0.05$). See **Table 3**.

**Table 3.** Comparison of nutritional indicators between the two groups [$\overline{x} \pm s$, g/L]

| **Group** | **Number of cases** | **Hb** | | **ALB** | | **TP** | |
|---|---|---|---|---|---|---|---|
| | | **Before care** | **After care** | **Before care** | **After care** | **Before care** | **After care** |
| Experimental group | 37 | 10.85 ± 1.49 | 12.95 ± 1.56 | 36.11 ± 3.78 | 41.98 ± 3.74 | 65.27 ± 4.53 | 73.98 ± 4.14 |
| Reference group | 37 | 10.81 ± 1.53 | 10.98 ± 1.32 | 36.14 ± 3.82 | 37.05 ± 3.70 | 65.22 ± 4.58 | 67.15 ± 4.10 |
| t | | 0.114 | 5.864 | 0.034 | 5.700 | 0.047 | 7.130 |
| p | | 0.910 | < 0.001 | 0.973 | < 0.001 | 0.962 | < 0.001 |

## 3.4. Comparison of immune function indicators between the two groups

The immune function indicators in the experimental group increased after nursing, with a significant inter-group difference ($p < 0.05$). See **Table 4**.

**Table 4.** Comparison of immune function indicators between the two groups [$\overline{x} \pm s$, mg/L]

| **Group** | **Number of cases** | **IgG** | | **IgA** | |
|---|---|---|---|---|---|
| | | **Before care** | **After care** | **Before care** | **After care** |
| Experimental group | 37 | 0.84 ± 0.16 | 1.53 ± 0.27 | 8.75 ± 1.36 | 11.56 ± 1.78 |
| Reference group | 37 | 0.81 ± 0.19 | 1.40 ± 0.25 | 8.77 ± 1.39 | 9.62 ± 1.70 |
| t | | 0.735 | 2.149 | 0.063 | 4.794 |
| p | | 0.465 | 0.035 | 0.950 | < 0.001 |

# 4. Discussion

Gastrointestinal tumors are malignant tumors with a relatively high incidence rate. There are many types of this disease, and it progresses rapidly, which can have a long-term impact on the quality of life of patients [3].

Chemotherapy is a commonly used treatment method for patients with this disease. It can improve disease symptoms and reduce tumor size through standardized chemotherapy, thereby delaying tumor progression. However, due to disease-related and chemotherapy-related factors, patients with this disease generally experience negative psychological states, have obvious physiological stress responses, and are prone to accompanying symptoms such as malnutrition and cancer-related fatigue, which in turn affect disease outcomes [4]. Therefore, it is necessary to strengthen nursing interventions for patients undergoing chemotherapy for gastrointestinal tumors, alleviate their psychological burdens, and improve their nutritional status to ensure the effectiveness of chemotherapy.

Integrated psychological nursing is a relatively new nursing method that can utilize emotional support, cognitive-behavioral interventions, and other means to alleviate patients' negative psychological states, enabling them to face chemotherapy correctly and maintain a healthy psychological state [5]. Enteral nutrition continuation nursing involves providing scientific enteral nutrition guidance outside the hospital. It can comprehensively assess patients' nutritional risks and formulate targeted nutritional support plans to maintain their negative nitrogen balance and protect organ function [6]. Additionally, enteral nutrition can supplement patients with nutrients, improve gastrointestinal function, and thereby enhance immunity, which is conducive to controlling the disease.

The results showed that the psychological scores and fatigue level scores of the experimental group after nursing were lower than those of the reference group ($p < 0.05$). Integrated psychological nursing can use emotional support measures to convey positive energy to patients, enabling them to fully feel the understanding and care from healthcare workers, fellow patients, and family members. This can enhance their confidence in fighting the disease and improve treatment compliance [7]. Using WeChat groups to disseminate nursing knowledge to patients can provide long-term information support, enabling them to continuously learn new knowledge and correctly view their own diseases, thereby alleviating negative psychological states such as anxiety [8]. Based on ABC theory, cognitive-behavioral interventions for patients can help them analyze the causes of negative psychological states and correct their erroneous beliefs and behaviors. Morita therapy can improve patients' self-acceptance, enabling them to accept their own diseases, face their current situations calmly, alleviate their sense of powerlessness, and thereby relieve cancer-related fatigue symptoms [9]. The nutritional and immune function indicators of the experimental group after nursing were higher than those of the reference group ($p < 0.05$). Enteral nutrition continuation nursing can simultaneously provide nutritional support and outpatient nursing. It can use scientific enteral nutrition methods to improve patients' physiological functions, early identify and manage adverse reactions, thereby enhancing the effectiveness of enteral nutrition and improving patients' nutritional status and immune function [10].

## 5. Conclusion

In conclusion, implementing integrated psychological nursing combined with enteral nutrition continuation nursing for patients undergoing chemotherapy for gastrointestinal tumors can improve their psychological well-being, alleviate cancer-related fatigue, improve their nutritional status, and protect their immune function, demonstrating high nursing efficacy.

## Disclosure statement

The authors declare no conflict of interest.

## References


[1] Zhu L, 2025, The Effect of Integrated Psychological Nursing Mode on Patients Undergoing Chemotherapy for Gastrointestinal Tumors. Contemporary Nursing, 6(9): 76–78.

[2] Zhang J, Li N, Zhu D, 2024, The Effect of Integrated Psychological Nursing Mode on Patients Undergoing Chemotherapy for Gastrointestinal Tumors. International Journal of Psychiatry, 51(6): 2002–2004.

[3] Tian M, Liu H, Wang J, 2022, Psychological Nursing Intervention Mode and Effect Evaluation for Improving Gastrointestinal Adverse Reactions in Tumor Chemotherapy Patients. Psychological Monthly, 17(12): 98–100 + 214.

[4] Qu Y, Liang Q, 2021, The Impact of Psychological Nursing and Personalized Nursing on the Psychology and Quality of Life of Patients After Chemotherapy for Gastrointestinal Tumors. Electronic Journal of Practical Clinical Nursing, 6(8): 76–79.

[5] Song D, Dai Y, Jin J, 2025, Observation on the Efficacy of Yigong San Combined with Enteral Nutrition in Treating Malnutrition in Elderly Patients with Qi-Deficiency Constitution Undergoing Chemotherapy for Gastrointestinal Tumors. Shanxi Journal of Traditional Chinese Medicine, 41(12): 13–15.

[6] Ta N, 2022, Discussion on the Impact of Dietary Nursing on the Nutritional Status of Patients With Gastrointestinal Tumors During Chemotherapy. Chinese Journal of Health Preservation, 40(21): 110–112.

[7] Duan Q, Zuo L, Yao X, 2021, Clinical Study on the Impact of Dietary Nursing Interventions on the Nutritional Status of Patients with Gastrointestinal Tumors During Chemotherapy. Chinese Community Doctors, 37(33): 120–121.

[8] Zhang J, 2022, The Impact of Dietary Nursing Interventions on the Nutritional Status of Patients During Chemotherapy for Gastrointestinal Tumors. Electronic Journal of Clinical Medical Literature, 9(30): 4–6.

[9] Zhang X, Li Y, Feng L, et al., 2024, Evidence Summary of Nutritional Management for Patients Undergoing Chemotherapy for Gastrointestinal Tumors. Journal of Nurses Training, 39(23): 2555–2562.

[10] Zhao W, Zhou X, 2022, The Impact of Comprehensive Nutritional Interventions on the Nutritional Status and Quality of Life of Patients Undergoing Chemotherapy for Gastrointestinal Tumors. Medicine, Diet Therapy and Health, 20(21): 23–25 + 127.