

The Impact of Continuity of Care on Negative Emotions and Self-Efficacy in Patients Undergoing Digestive Endoscopic Tumor Resection

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Abstract: *Objective:* To explore the impact of a continuity of care model on negative emotions and self-efficacy in patients undergoing digestive endoscopic tumor resection. *Methods:* A retrospective analysis was conducted on 80 patients who underwent digestive endoscopic tumor resection in the Gastroenterology Department of Baoying County People's Hospital between October 2022 and October 2024. Patients were randomly divided into a control group ($n = 40$) and an observation group ($n = 40$) using a random number table. The control group received routine nursing care, while the observation group was additionally provided with continuity of care interventions. After two months of intervention, the negative emotions and self-efficacy of the two groups were compared and statistically analyzed. *Results:* There was no statistically significant difference in baseline data between the two groups ($P > 0.05$). After two months of intervention, the observation group demonstrated significantly lower HAMD and HAMA scores compared to the control group (both $P = 0.000$), and significantly higher GSES scores ($P = 0.000$). *Conclusion:* Applying a continuity of care model to patients undergoing digestive endoscopic tumor resection can alleviate negative emotions, enhance self-efficacy, and improve self-care abilities.

Keywords: Digestive endoscopic tumor resection; Continuity of care; Negative emotions; Self-efficacy

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1. Introduction

Digestive system tumors pose a serious threat to human health and quality of life. Digestive endoscopic tumor resection, as a minimally invasive treatment, has been increasingly utilized in the field of oncology^[1]. Although the surgical trauma is relatively minor, the postoperative recovery journey remains challenging for patients. The uncertainty associated with tumor diseases, fear of recurrence, and concerns about future life often leave

patients trapped in a vortex of anxiety, depression, and other negative emotions. These emotions not only affect psychological well-being but may also hinder physical recovery, impair immune function, and slow the healing process ^[2].

At the same time, cultivating patients' self-care abilities after discharge is critical to their long-term recovery. Self-efficacy, defined as an individual's subjective judgment of their ability to successfully perform certain behaviors, plays a pivotal role in self-care. Higher self-efficacy motivates patients to actively engage in self-care practices such as adhering to medical advice, making dietary adjustments, performing rehabilitation exercises, taking medications on time, and attending regular follow-ups. These activities effectively promote physical recovery and improve quality of life ^[3].

Traditional nursing models often focus on inpatient care, with relatively weak support for patients after discharge, failing to meet their multifaceted needs during recovery. The continuity of care model aims to bridge the gap between inpatient and post-discharge care by providing patients with continuous, systematic, and comprehensive nursing services. This model ensures professional nursing guidance, psychological support, and health monitoring throughout the recovery period.

In light of this, the present study aims to explore in depth the effects of the continuity of care model on negative emotions and self-efficacy in patients undergoing digestive endoscopic tumor resection. The goal is to provide scientific evidence for optimizing nursing plans for these patients, thereby helping them better navigate their postoperative recovery, improving their quality of life, and promoting holistic physical and mental health restoration.

2. Materials and methods

2.1. General data

A retrospective analysis was conducted on 80 patients who underwent digestive endoscopic tumor resection in the Gastroenterology Department of Baoying County People's Hospital between October 2022 and October 2024. Patients were randomly assigned to either the control group ($n = 40$) or the observation group ($n = 40$) using a random number table.

Inclusion criteria: (1) Clinically diagnosed with digestive tract tumors and meeting the indications for digestive endoscopic tumor resection surgery; (2) Basic communication and comprehension abilities, enabling participation in nursing interventions and assessments; (3) Age between 18 and 65 years; (4) Informed consent provided by the patient or their family members, with relevant consent forms signed.

Exclusion criteria: (1) Severe dysfunction of major organs such as the heart, lungs, liver, or kidneys, rendering the patient unable to tolerate surgery or subsequent nursing interventions; (2) Pre-existing severe mental disorders or cognitive impairments that hinder accurate assessment of emotions and self-efficacy; (3) Severe postoperative complications, such as gastrointestinal hemorrhage or perforation, requiring emergency reoperation or intensive care unit (ICU) admission.

2.2. Methods

The control group received routine nursing care, including disease education, condition monitoring, and pain management. The observation group, in addition to routine nursing care, received continuity of care interventions, which included the following measures:

- (1) Establishing a continuity of care team: A team was formed with the head nurse of the Gastroenterology Department as the leader and nurses with extensive clinical experience, strong communication skills, and solid professional knowledge as team members. All team members underwent systematic training in continuity of care ^[4].
- (2) Pre-discharge nursing guidance: Comprehensive education on disease recovery was provided to patients and their families. This included explanations of the characteristics of each recovery stage, precautions, potential issues, and corresponding solutions. Individualized self-care training was provided based on the type of surgery and the patient's physical condition. Personal health records were established for each patient, documenting basic information, surgical details, physical condition at discharge, and follow-up plans to facilitate continuity of care.
- (3) Telephone follow-ups: After discharge, nursing team members conducted weekly telephone follow-ups to monitor patients' general condition, physical health, and psychological state. They also addressed any problems encountered by patients and their families during recovery ^[5].
- (4) Online platform support: A rehabilitation communication WeChat group was created for patients undergoing digestive endoscopic tumor resection, inviting patients and their families to join. Regular updates were shared in the group on topics such as disease recovery, nursing skills, and dietary planning. Nurses were assigned to provide on-duty support within the group, promptly addressing patient and family inquiries. Periodic online rehabilitation lectures were also organized, with experts in gastroenterology, nutrition, and psychology delivering sessions. Patients and their families could participate via mobile devices or computers, engage in interactive Q&A sessions, and seek clarification from experts after the lectures ^[6].

2.3. Observation indicators

Data collected included patients' general information. Negative emotions were assessed using the Hamilton Depression Scale (HAMD, 0–52 points) and Hamilton Anxiety Scale (HAMA, 0–56 points) at admission (pre-intervention) and two months after discharge (post-intervention). Self-efficacy was evaluated using the General Self-Efficacy Scale (GSES, 10–40 points), with higher scores indicating stronger self-efficacy.

2.4. Statistical methods

Data analysis was performed using SPSS 25.0 statistical software. Continuous data were expressed as mean \pm standard deviation (SD), and comparisons between groups were conducted using *t*-tests. Categorical data were presented as frequencies and percentages, and group comparisons were performed using χ^2 tests. A *P*-value of < 0.05 was considered statistically significant.

3. Results

3.1. Comparison of general data between the two groups

There were no statistically significant differences in the general data between the two groups ($P > 0.05$), indicating comparability. Detailed data are shown in **Table 1**.

Table 1. Comparison of general data between the two groups

Group	Gender (n)		Age (mean \pm SD, years)	Average tumor size (cm)
	Male	Female		
Control group ($n = 40$)	22	18	54.25 \pm 7.52	3.12 \pm 1.31
Observation group ($n = 40$)	20	20	53.85 \pm 7.78	3.20 \pm 1.33
χ^2 / t value			0.234	0.271
P value			0.816	0.787

3.2. Comparison of negative emotions between the two groups before and after intervention

After the intervention, the HAMD and HAMA scores of patients in the observation group were significantly lower than those in the control group ($P = 0.000$). Detailed data are shown in **Table 2**.

Table 2. Comparison of negative emotions before and after intervention (mean \pm SD)

Group	HAMD score		HAMA score	
	Before intervention	After intervention	Before intervention	After intervention
Control group ($n = 40$)	26.02 \pm 5.04	19.32 \pm 4.51	38.21 \pm 5.61	26.13 \pm 5.04
Observation group ($n = 40$)	26.35 \pm 5.21	15.12 \pm 3.35	39.14 \pm 6.16	15.06 \pm 3.28
t value	0.288	4.728	0.706	11.643
P value	0.774	0.000	0.482	0.000

3.3. Comparison of self-efficacy between the two groups before and after intervention

After the intervention, the GSES scores of patients in the observation group were significantly higher than those in the control group ($P = 0.000$). Detailed data are shown in **Table 3**.

Table 3. Comparison of self-efficacy before and after intervention (mean \pm SD)

Group	GSES Score	
	Before intervention	After intervention
Control group ($n = 40$)	21.02 \pm 1.34	27.32 \pm 1.51
Observation group ($n = 40$)	21.35 \pm 1.38	36.12 \pm 1.66
t value	1.085	24.802
P value	0.281	0.000

4. Discussion

Endoscopic tumor resection is widely used as a minimally invasive surgical approach for the treatment of gastrointestinal tumors. However, patients undergoing this procedure still face numerous challenges and demands

during the postoperative recovery process. On one hand, they must endure a recovery period to minimize complications. On the other hand, the psychological impact of the tumor diagnosis often triggers anxiety, fear, and depression, which can negatively affect physical recovery^[7]. Thus, patients require a comprehensive, systematic, and continuous nursing model that addresses both physical rehabilitation needs and psychological well-being, offering effective support and guidance.

The results of this study demonstrate that continuity of care model significantly reduces negative emotions in patients undergoing endoscopic tumor resection. This improvement can be attributed to several interventions provided by this care model. Firstly, detailed pre-discharge guidance and education ensure that patients and their families have a clearer understanding of the recovery process, reducing fear and uncertainty. For example, explaining potential postoperative symptoms and their management equips patients to handle issues confidently, preventing undue panic when problems arise^[8]. Secondly, follow-up phone calls and home visits offer consistent psychological support and emotional care. During these follow-ups, healthcare providers can assess patients' psychological states, alleviate their stress through active listening, provide comfort, and boost morale. For instance, when patients experience anxiety due to discomfort or concerns about disease prognosis, nurses can patiently address their worries, clarify relevant information, and share successful recovery stories to enhance their confidence.

Furthermore, the establishment of an online platform creates a space for interaction and communication. Patients can exchange experiences and share feelings with peers, realizing they are not alone, thereby alleviating their psychological burdens. Professional advice and support from healthcare providers within the platform reinforce patients' sense of care and guidance, further improving their emotional well-being^[9]. Physiologically, continuity of care also contributes positively to reducing negative emotions. Continuous monitoring and guidance on health, such as dietary adjustments and rehabilitation exercises, promote physical recovery, enhancing comfort and indirectly alleviating psychological stress. For example, proper nutrition improves physical strength, making patients feel more physically capable and emotionally stable.

The enhancement of self-efficacy plays a vital role in patients' recovery. Patients with higher self-efficacy are more proactive in following medical advice, maintaining self-care routines, and participating in rehabilitation exercises, which facilitates functional recovery and improves quality of life. The findings of this study reveal that the continuity of care model significantly improves self-efficacy among patients undergoing endoscopic tumor resection.

Firstly, pre-discharge nursing guidance provides systematic training on self-care skills, enabling patients to develop basic self-care knowledge and skills. This foundation fosters confidence in their ability to manage their recovery independently, enhancing their sense of self-efficacy^[10].

Secondly, during follow-up calls, healthcare providers' supervision, guidance, and timely encouragement reinforce patients' progress and boost their confidence in their abilities^[11]. Additionally, the online platform offers learning and interaction opportunities. Patients can expand their knowledge and skills by watching educational videos and reading articles, while also drawing on the experiences of others to improve their self-care capabilities. This, in turn, enhances their self-efficacy^[12]. For instance, patients who apply rehabilitation exercise techniques shared by peers and achieve positive results develop a more optimistic assessment of their recovery potential.

5. Conclusion

In conclusion, the continuity of care model has significant effects on alleviating negative emotions and enhancing self-efficacy in patients undergoing endoscopic tumor resection. It has important clinical value and broad potential for application. This model is worth further promotion and implementation in clinical nursing practice, with ongoing exploration and refinement to maximize its benefits.

Disclosure statement

The authors declare no conflict of interest.

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