

Original Article

Humanistic care improves negative emotions and quality of life in colon cancer patients undergoing colostomies

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Abstract: Objective: This study aimed to explore the effect of humanistic care on the negative emotions and quality of life (QoL) of colon cancer patients with stoma. Methods: We prospectively analyzed 90 colon cancer patients who underwent colostomies at the General Hospital of Central Theater Command from July 2016 to June 2019 and randomly divided the cases into a humanistic care group (n=45) and a routine care group (n=45) according to the care method each received. The routine care group received conventional care, and the humanistic care group received humanistic care in addition to the conventional care. In addition, we compared the patients' negative emotions, self-care abilities, general comfort levels, happiness levels, and QoL before and after the intervention as well as the complication rates and nursing satisfaction in the two groups. Results: After the intervention, the self-rating depression scale, self-rating anxiety scale, and negative affect scores in both groups were decreased, but the self-care ability, general comfort, positive affect, subjective well-being and QoL scores were increased, compared with the scores before the intervention. The humanistic care group showed a greater change in the indicators than the routine care group (all $P < 0.05$). In addition, the total complication rate was lower, and the nursing satisfaction was higher in the humanistic care group than they were in the routine care group (both $P < 0.05$). Conclusion: Humanistic nursing care for colon cancer patients with stomas can significantly improve the negative emotions, self-care abilities, general comfort levels, happiness levels, QoL and nursing satisfaction, as well as reduce the complication rates.

Keywords: Colon cancer stoma, humanistic care, negative emotions, quality of life, self-care abilities

Introduction

Colon cancer, a malignant tumor of the digestive tract, occurs mostly at the recto-sigmoid junction with an increasing incidence, seriously endangering patients' lives [1, 2]. Currently, colostomy is a common operation for the treatment of colon cancer and can effectively improve the prognosis [3]. However, due to great changes in self-image, excretion function, and personal hygiene, many patients are prone to suffer from negative emotions such as anxiety, depression, and low self-esteem, which greatly affects their quality of life (QoL) [4]. Hence, an effective nursing intervention to alleviate their negative emotions and improve their QoL is essential for patients with colostomies. Moreover, patients given routine nursing care

can receive health education, but the lack of sufficient humanistic care makes the education fail to effectively ameliorate the negative emotions and QoL.

Humanistic care, first proposed by Leininger, mainly refers to personalized services and activities [5]. In the nursing process, care is provided in a respectful and supportive manner to help each individual patient fulfill his or her needs, improve his or her QoL or accept death calmly. The core of humanistic care is a people-oriented, patient-centered nursing intervention that makes patients truly feel concerned and cared for with a focus on the patients' needs. Humanistic nursing care in many patients with malignant tumors is essential and can effectively improve their QoL. It is reported by Wang

et al. that humanistic nursing care in breast cancer patients significantly improves the cancer-related fatigue and QoL [6]. Herein, we investigated the effect of humanistic care for colon cancer patients with stoma.

Materials and methods

General data

A total of 90 colostomy patients admitted to the General Hospital of Central Theater Command from July 2016 to June 2019 were randomly divided into a humanistic care group (n=45) and a routine care group (n=45) for a prospective analysis according to which care method each received. The patients were included in the study if they had confirmed indications for colostomy without distant or systemic metastasis and if they had an expected survival time of more than one year. Additionally, patients with severe infectious diseases, neurological dysfunction, cognitive dysfunction, or other vital organ dysfunctions were excluded. Those with incomplete clinical data or women who were pregnant or lactating were also excluded. Written informed consents were obtained from all the patients and their families and ethical approval for the study was given by the Ethics Committee of General Hospital of Central Theater Command.

Nursing methods

The routine care group received conventional nursing care, including helping the patients become familiar with the hospital environment, monitoring their vital signs, performing diet nursing in accordance with the principle of high-nutrition multiple small meals, and providing health education, stoma self-care guidance, and discharge instructions [7].

The humanistic care group received humanistic nursing care based on routine care, including preoperative psychological intervention, stoma site selection, postoperative targeted nursing, rehabilitation nursing, and social support [8].

As to the preoperative psychological intervention, the relevant surgeons and nurses visited the patients one day before their surgeries and patiently explained the causes, clinical manifestations, stoma methods of colon cancer, and gave advice to the patients and their families. It was emphasized that colostomy mainly

affected the defecation channel rather than the digestive function and would not change the patients' daily lives or work with appropriate nursing programs. Moreover, proactive communications were built in to encourage the patients to complain of inner discomfort; if necessary, the patients could regulate their moods with yoga meditative relaxation method with the help of professionals, so as to minimize their negative emotions such as anxiety and depression. Patients who had undergone colostomies with a good prognosis were also invited to strengthen patient confidence in the treatment.

As to the preoperative stoma site selection, the stoma site was jointly determined by the surgeons and patients for better self-care, instead of being selected by surgeons during the operation, which can cause various complications and difficult self-care for some postoperative patients.

As to the postoperative targeted nursing, the colostomy nursing methods (e.g., selecting an appropriate colostomy bag) were actively demonstrated to the patients and their families on the spot. Meanwhile, the guidance for adjusting the dietary structure and preventing stoma care-related skin problems were also introduced.

As to rehabilitation nursing, transitional care was implemented for the patients with telephone follow-up once a week and home follow-up once a month. In addition, a class for stoma patients was organized as an exchange platform once every 3 months. During the process, stoma-related knowledge and self-care methods were patiently introduced, and the patients were reminded of their regular return visits for a better understanding of their own recovery statuses.

As to social support, the patients were given support and encouragement, especially from their relatives and friends, who were advised to avoid emotions such as disgust and boredom to make the patients maintain an optimistic attitude and actively cooperate with the treatment and nursing care.

Outcome measures

The self-rating depression scale (SDS), self-rating anxiety scale (SAS), self-care ability rating

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Table 1. General data

Group	Gender		Age (year)	Pathological type		
	Male	Female		Adenocarcinoma	Mucinous adenocarcinoma	Undifferentiated carcinoma
Routine care group (n=45)	32	13	61.3±8.1	29	12	4
Humanistic care group (n=45)	30	15	60.8±7.6	27	13	5
χ^2/t	0.207		0.265	0.189		
P	0.649		0.792	0.664		

scale, Kolcaba's General Comfort Questionnaire (GCQ), Memorial University of Newfoundland Scale of Happiness (MUNSH), Gastrointestinal Quality of Life Index (GIQLI), and the self-made satisfaction questionnaire were all completed by the patients under the guidance of trained chief nurses. The negative emotions, self-care ability, general comfort level, happiness level and QoL were assessed and compared after admission and again at discharge (before and after the intervention). The complication rates and nursing satisfaction were compared between the two groups.

Among the outcome measures, negative emotions were assessed using the SAS and SDS [6, 7]. Higher scores reflect more severe anxiety and depression, respectively. The self-care ability was evaluated using the self-care ability rating scale with a higher score representing a better self-care ability [8]. Further, the general comfort level was assessed using Kolcaba's GCQ, with a higher score indicating better general comfort. The happiness level was assessed using the MUNSH, which was divided into three dimensions: positive affect, negative affect, and subjective well-being [9]. Higher positive affect and subjective well-being scores, and lower negative affect scores all indicate better well-being. The QoL was evaluated using the GIQLI, with a higher score representing better QoL [10]. As for evaluating the complications, stoma hemorrhage, ischemia, necrosis and mucocutaneous separation were included. The patient satisfaction with the nursing care was categorized into three levels: satisfied, moderately satisfied, and dissatisfied. Satisfaction = (satisfied cases + moderately satisfied cases)/total number of cases * 100%.

Statistical analysis

The data analyses were performed using SPSS 20.0 software. The measurement data with a normal distribution were expressed as the me-

an \pm standard deviation ($\bar{x} \pm sd$). Independent t-tests were used for the comparisons between the two groups, and paired samples t-tests were applied for the comparisons before and after the intervention within a group. Chi-square tests (χ^2 test) were adopted for the comparisons of the enumeration data (e.g., total complication rate and nursing satisfaction) and expressed as the case/percentage (n/%). A significance level of $\alpha=0.05$ was adopted. $P < 0.05$ was considered significantly different.

Results

General data

There were no significant differences in terms of age, gender, or pathological type between the two groups, suggesting that the two groups were comparable. See **Table 1**.

Comparison of the negative emotions

After the intervention, the SAS and SDS scores in both groups were reduced, but the humanistic care group showed a significantly greater decrease than the routine care group ($P < 0.05$). The results indicate that humanistic nursing care can effectively alleviate anxiety and depression. See **Figure 1**.

Comparison of the self-care abilities and general comfort levels

After the intervention, the self-care ability and general comfort scores in both groups were significantly improved, but the humanistic care group showed a significantly greater increase than the routine care group ($P < 0.05$). The results reveal that humanistic nursing care is effective in facilitating self-care abilities and general comfort. See **Table 2**.

Comparison of the happiness levels

After the intervention, the positive affect and subjective well-being scores in both groups

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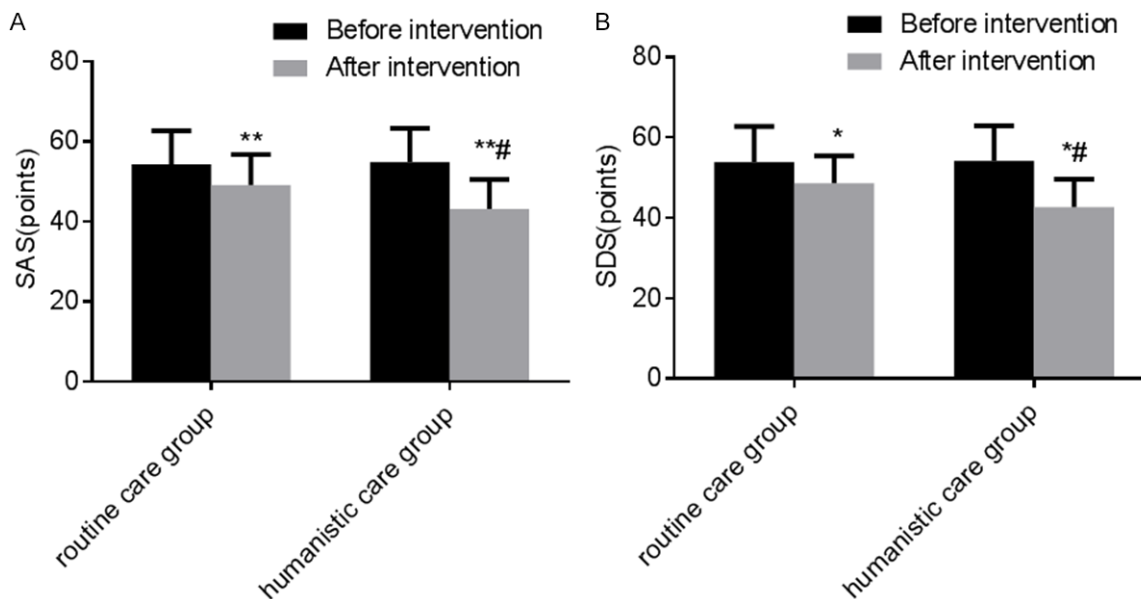


Figure 1. Comparison of the SAS and SDS scores ($\bar{x} \pm sd$, points). A. SAS scores. B. SDS scores. Compared with pre-intervention, * $P < 0.05$, ** $P < 0.01$; Compared with routine care, # $P < 0.05$. SAS: self-rating anxiety scale; SDS: self-rating depression scale.

Table 2. Comparison of the self-care abilities and general comfort levels ($\bar{x} \pm sd$, points)

Group	Self-care ability		General comfort level	
	Before nursing	After nursing	Before nursing	After nursing
Routine care group (n=45)	68.83±7.12	75.40±9.10***	73.24±7.90	79.62±8.10***
Humanistic care group (n=45)	67.36±6.80	87.57±9.68***	72.00±7.58	93.25±5.88***
t	1.002	6.145	0.760	9.135
P	0.319	0.000	0.449	0.000

Note: Compared with pre-intervention, *** $P < 0.001$.

were significantly increased, but the negative affect scores were markedly decreased. The positive affect and subjective well-being scores were higher, and the negative factor was lower in the humanistic care group than it was in the routine care group (all $P < 0.05$). The results demonstrate that humanistic nursing care can greatly promote patients' happiness. See **Table 3**.

Comparison of the QoL scores

After the intervention, the QoL scores in both groups were significantly improved, but the humanistic care group showed a significantly greater increase than the routine care group ($P < 0.05$), suggesting that humanistic nursing care can enhance the QoL markedly. See **Table 4**.

Comparison of the complication rates

The total complication rate of 2.22% in the humanistic care group was much lower than that the rate of 17.78% in the routine care group ($P < 0.001$). See **Table 5**.

Comparison of the nursing satisfaction

The satisfaction rate of 95.56% in the humanistic care group was much higher than the rate of 71.11% in the routine care group ($P < 0.05$). See **Table 6**.

Discussion

In recent years, colon cancer has become one of the most common of gastrointestinal cancers, with an increasing prevalence in China.

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Table 3. Comparison of the happiness scores ($\bar{x} \pm sd$, points)

Group	Positive affect		Negative affect		Subjective well-being	
	Before nursing	After nursing	Before nursing	After nursing	Before nursing	After nursing
Routine care group (n=45)	9.14±3.55	12.25±3.10***	7.57±2.10	6.20±1.95***	8.63±3.10	10.42±3.77***
Humanistic care group (n=45)	9.23±3.16	15.73±4.68***	7.80±2.33	5.25±1.86***	8.30±3.27	15.15±3.80***
t	0.127	4.159	0.492	2.365	0.491	5.928
P	0.899	0.000	0.624	0.020	0.624	0.000

Note: Compared with pre-intervention, ***P<0.001.

Table 4. Comparison of the QoL scores ($\bar{x} \pm sd$, points)

Group	Before nursing	After nursing
Routine care group (n=45)	68.73±9.15	76.42±10.25***
Humanistic care group (n=45)	67.10±8.77	84.24±11.66***
t	0.863	3.379
P	0.391	0.001

Note: Compared with pre-intervention, ***P<0.001. QoL: quality of life.

Owing to the location of the tumors (low position), nearly half of the patients need to undergo a colostomy. However, colostomy patients are still prone to complications such as stomal stenosis, inflammation, and edema, though the symptoms are alleviated. For one thing, the potential complications heavily affect the patients' physiological functions, causing certain difficulties in their postoperative lives. Also, the stoma greatly changes the patients' living habits, possibly evoking negative emotions such as anxiety, fear, and anger, and reducing the therapeutic effect and QoL [10-13]. Therefore, more attention should be given to the emotional problems of stoma patients. Through timely and effective nursing interventions, negative emotions can be eliminated to enhance the QoL.

Studies have shown that humanistic nursing care mobilizes the enthusiasm and initiative of patients through respect, care, understanding and trust, so as to ensure the rights and interests such as protection rights, personal safety, and individual willingness. In the nursing process, effective psychological counseling is performed to help patients solve psychological problems and correctly understand the role and meaning of the artificial colonic anus. By doing this, stoma patients can adapt to its impact, become active, and regulate negative mood states, so as to change their own behaviors [14, 15]. In this study, we identified that after the intervention, the SAS, SDS, and negative affect scores in both groups were re-

duced, but the scores of self-care ability, general comfort, positive affect, subjective well-being and QoL were improved, compared to the corresponding scores before the intervention. The SAS, SDS, and negative affect scores were lower, and the self-care ability, general comfort, positive affect, subjective well-being, and QoL scores were higher in the humanistic care group than they were in the routine care group. The results demonstrate that humanistic nursing care can effectively relieve negative emotions (e.g., anxiety and depression), and improve self-care ability, general comfort level, happiness level, and QoL. The reason for this is that we performed the preoperative psychological intervention, stoma site selection, postoperative targeted nursing, and rehabilitation nursing for the stoma patients. Through a preoperative psychological intervention, the medical and nursing staff can not only introduce knowledge on colon cancer and its treatment to patients, but they can also establish active communications to solve the patients' psychological problems and alleviate their negative emotions. These measures are conducive to the improvement of patient compliance and confidence, enabling them to actively accept the surgical treatment. Through the preoperative stoma site selection, the patients can participate in the stoma site selection, which makes them feel more cared for and respected as well as more being more conducive to stoma self-care [16, 17]. Furthermore, through postoperative targeted and rehabilitation nursing, patients can receive targeted nursing care in the rehabilitation period after the surgery, so that they can effectively master stoma nursing methods, improve their self-care abilities, and thus reduce their complication rates and enhance their QoL [18, 19]. Through social support, the patients can feel the warmth and support from their families and society, which promotes the

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Table 5. Comparison of the complication rates (n, %)

Group	Stomal hemorrhage	Stomal ischemia	Stomal necrosis	Mucocutaneous separation	Total complication rate
Routine care group (n=45)	4 (8.89)	2 (4.44)	1 (2.22)	1 (2.22)	8 (17.78)
Humanistic care group (n=45)	0 (0.00)	0 (0.00)	0 (0.00)	1 (2.22)	1 (2.22)
χ^2	2.355	0.511	0.000	0.511	4.444
P	0.125	0.475	1.000	0.475	0.014

Table 6. Comparison of the nursing satisfaction (n, %)

Group	Satisfied	Moderately satisfied	Dissatisfied	Total satisfaction rate
Routine care group (n=45)	15 (33.33)	17 (37.78)	13 (28.89)	32 (71.11)
Humanistic care group (n=45)	31 (68.89)	12 (26.67)	2 (4.44)	43 (95.56)
χ^2				9.680
P				0.002

emotional communications between patients and their families, facilitates patients' sense of security, well-being, and general comfort, and thus eliminates their negative emotions to a certain degree [20, 21]. In addition, Wang et al. reported that humanistic nursing care in patients undergoing eye surgery effectively alleviated their adverse emotions such as preoperative self-perceived burdens, anxiety, and depression [22]. Similarly, Zhang et al. found that the early care inpatient mode in patients undergoing colorectal cancer surgery effectively reduced their psychological pain and promoted their QoL and clinical efficacy [23]. In this study, our results were consistent with the above results.

In addition, Chen et al. demonstrated that humanistic nursing care for patients receiving percutaneous nephrolithotomy significantly decreased the incidence of complications (e.g., massive intraoperative hemorrhage, residual stones, and infections), thereby improving the success rate of nephrolithotomy [24]. Guo et al. demonstrated that humanistic care for patients with perioperative vulvar cancer enhanced their self-care ability and QoL, reduced their postoperative complication rates, and prolonged their survival times [25]. In line with the results above, our study revealed that the complication rates in the humanistic care group were much lower than they were in the routine care group, indicating that humanistic nursing care for stoma patients can significantly reduce their complication rates and play a crucial role in improving the prognosis.

Additionally, the nursing satisfaction rate in the humanistic care group was significantly higher than it was in the routine care group, suggesting that humanistic nursing care for stoma patients can improve patients' satisfaction with the care. Ji et al. demonstrated that humanistic nursing care in patients receiving hand surgery significantly promoted their nursing satisfaction in terms of information demand, service attitude, humanistic care, and the nurses' professional responsibility. The results suggest that humanistic nursing care can markedly ameliorate nursing satisfaction, nursing quality, and patient prognosis, which is consistent with the results in our study [26]. However, with the small sample size in this study, we are aware that multicenter studies with larger sample sizes are needed to further explore the clinical effect of humanistic nursing care in the future.

In summary, humanistic nursing care for colon cancer patients with stomas can markedly improve their negative emotions, self-care abilities, general comfort levels, happiness levels, QoL and patient satisfaction with care, as well as decrease their complication rates, so it is worthy of being popularized in clinical practice.

Disclosure of conflict of interest

None.

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