Iran J Public Health, Vol. 53, No.5, May 2024, pp.1087-1095

Original Article

People-Oriented Nursing Mode on the Negative Emotions and Psychological Status of Patients with Bladder Cancer

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(Received 10 Apr 2023; accepted 10 Jul 2023)

Abstract

Background: We aimed to investigate the clinical application effect of people-oriented nursing model on the negative emotions and psychological conditions of patients with bladder cancer.

Methods: Eighty patients with bladder cancer were enrolled from January 2020 to January 2022 in the Second Affiliated Hospital of Qiqihar Medical University Heilongjiang, Province, China. The patients were randomly divided into the control group, each group consisted of 40 patients (conventional nursing mode) and the experimental group (people-oriented nursing mode) according to the admission time. The differences of the anxiety, depression and quality of life scores at the time of admission and discharge were compared between the two groups.

Results: There was statistically significant differences in the Self-Rating Anxiety Scale (SAS) and Self-rating depression scale (SDS) score within each group of patients and between the two groups at the time of admission and discharge, respectively (P=0.001). In addition, there was a statistically significant difference in the scores at discharge, and the scores of the patients in the experimental group were better than those in the control group. There was a statistically significant difference in the scores at discharge, and the scores of the experimental group were lower than those of the control group P<0.001). After comparing the overall scores of admission and discharge of the two groups of patients, the differences were statistically significant, and the scores at discharge were better improved than those at admission were.

Conclusion: The people-oriented nursing model could relieve the negative emotions, relieve pain and improve the life quality of patients with bladder cancer.

Keywords: Bladder cancer; People-oriented; Negative emotion; Psychological; Nursing

Introduction

As a common malignant tumor, the incidence of bladder cancer is increasing gradually in recent years. Although the early-stage bladder tumors can often be removed by surgery to prolong the survival of patient, it is prone to recurrence after surgery, and the disease course is long, which exert a serious impact on the physiology and psychology of patients (1-3).

Most patients with bladder cancer suffer from anxiety, depression and other negative emotions, resulting resistance to treatment and then affect the prognosis of the disease (4-6). Thus, how to relieve the negative emotions of patients with bladder cancer during hospitalization has become an urgent clinical issue. As an indispensable part of clinical diagnosis and treatment, and different nursing modes also have an important impact on the prognosis of diseases. The people-oriented nursing mode has been widely applied in the nursing practice of patients with cancer, and has achieved positive effect. However, researches focus on the effect of people-oriented nursing mode in relieving the negative emotions of bladder cancer patients is limited until now.

We selected patients with bladder cancer treated in our hospital to evaluate the clinical application value of this nursing mode.

Materials and Methods

Basic characteristics of the patients

Eighty bladder cancer patients admitted to the Second Affiliated Hospital of Qiqihar Medical University, Qiqihar City, China from January 2020 to January 2022 were selected. They were randomly divided into the control group (conventional nursing mode) and the experimental group (people-oriented nursing mode), 40 cases in each group. There were 21 males and 19 females in the control group, with an average age of 61.57±2.28 years. The experimental group consisted of 22 males and 18 females with an average age of 62.07±2.19 years.

The inclusion criteria are as follows: 1) Patients diagnosed with bladder tumor by pathological or cytological examination; 2) Patients with no family or history of mental disorders; 3) Patients > 18 aged years and the expected survival time > 1 year. Patients who had cognitive impairment and poor compliance, unable to cooperate with the investigators were excluded.

The study was approved by the Review Committee and reviewed by the Ethics Committee of The Second Affiliated Hospital of Qiqihar Medical University((Qi) Ethics Review [2020] No. 1208-3),

Intervention method

Nursing model of the control group

The patients in the control group were treated with routine nursing care. Briefly, the nurse in charge will introduce the doctor concerned and the precautions for hospitalization. The patients were instructed to fast food and water before the operation, and the precautions and possible adverse reactions after the operation were introduced to the patients. Meanwhile, the nurse in charge will monitor the vital signs of patients after surgery, and guide the patient to take medication as prescribed by the doctor.

Nursing model of the intervention group

People-oriented nursing team organization

Ten nursing staff, including 5 primary nurses, 3 supervisor nurses, and 1 co-chief nurse are selected from our department to form a people-oriented nursing team, and the team leader was directly held by the head nurse and took full responsibility. Before the start of the trial, the people-oriented nursing process and content were constructed, and the team members were organized to conduct unified training. The training content mainly included: people-oriented nursing concept, previous reported successful cases, experimental purposes, process and various nursing parts content of the experiment.

Nursing process

People-oriented admission nursing

Based on the routine nursing registration and safety publicity, the attitude of the people-oriented nursing team and the reception process are standardized as follows: 1) Patients should be received with a warm attitude, be asked the disease progress and hospitalization needs in a gentle tone and make detailed evaluation records; 2) After being hospitalized, the nurse in charge should lead the patient into the ward, familiarize himself with the environment, adjust the temperature of the ward, and achieve humanized and personalized service.

People-oriented environmental nursing

The people-oriented nursing team strived to create a clean, warm and quiet hospital environment, limit the number of escorts, and reduce the number and time of unnecessary ward visits. The introduction of the doctors in the department, the knowledge of disease prevention and health care, and the precautions after operation were hung on the wall of the department corridor. The ward is equipped with central air-conditioning, television, toilet and other equipment, which brings a family-style hospitalization experience to the patient. In addition, family members were asked to accompany the patient as much as possible to relieve the loneliness and fear of the patient.

People-oriented psychological nursing

The intervention of the psychology of patients is an important strategy to improve the prognosis of the disease and even expand the expected survival period. The nurses in charge were required to communicate with the patients sufficiently. Briefly, the nurses should give a self-introduction at first to gradually build a friend relationship rather than a nursing-patient relationship. Meanwhile, the people-oriented nursing team are required to understand the innermost feelings idea of patient, grasp their personal needs, assess the current negative emotions of the patient accurately, and feedback to the psychologist timely to assist the psychologist to formulate and implement psychological intervention plans. When carrying out daily nursing work, the nurses need adjust the way of speaking to avoid the use of commanding language, and use words that will make the patient feel encouraged and comfortable as much as possible to avoid direct conflicts with patients and reduce misunderstandings. For the needs of patients and their families, they are treated with patient listening and efforts to solve the issues. After surgery, it is necessary to pay more attention to the psychological changes of the patient. After the tumor is removed, the patients need to undergo urostomy surgery, which brings a lot of inconvenience to their lives and increases their psychological burden. Postoperative patients should be clearly informed of the troubles that ostomy surgery may bring to their lives, but medical staff will overcome the difficulties together with patients.

People-oriented pain nursing

Pain is a principal factor affecting the physical and mental health of patients with bladder cancer. Therefore, from the day the patient is admitted to the hospital, multi-mode analgesic care should be implemented for the patient, which mainly involving the followings: 1) After the patient is admitted to the hospital, according to the performance and chief complaint of patient and the severity of the pain level, the nursing team are required to timely feedback to the physician, and assist them to carry out reasonable drug analgesia; 2) Explain the disease treatment method and introduce successful treatment cases to the patient, so that the patient could gradually establish confidence to overcome the disease; 3) Encourage the family members to communicate with the patient, divert their attention, organize activities such as patient associations to reduce the alone time of patient.

People-oriented perioperative nursing

For patients who need to undergo cystectomy, the fasting time, the name of the operation, and the precautions after the operation are explained before the operation, so that the patient will have sufficient psychological preparation. Because patients may need to stay in bed for a long time after surgery, the nursing requirements for skin and urinary system are more stringent. Under the condition of ensuring a quiet and suitable environment, the nursing team are required to strengthen the evaluation of the skin, stoma wound, stool frequency and other indicators of patient to avoid postoperative pressure ulcers, wound infection and other complications. In addition, the nurses need assist dietitians to formulate reasonable dietary plans for patients. In the later stage of the recovery, actively cooperate with the rehabilitation physician and urge the patient to undergo rehabilitation training.

People-oriented stoma and drainage tube nursing

On the one hand, it is necessary to explain in detail the role and necessity of ostomy surgery and indwelling drainage tube, so that patients can gradually accept it and improve compliance. On the other hand, it is necessary to closely observe the skin condition around the stoma, clean up the secretions around the stoma in time, keep the wound clean, and prevent the occurrence of infection. When changing the dressing, the movements are gentle and the operation is standardized. During the process, keep talking with the patient and ask them if they feel discomfort. In addition, the nursing team checked the patency and firmness of the drainage tube to prevent the drainage tube from being folded and compressed.

People-oriented discharge follow-up

A discharge handbook is prepared, which mainly includes the time of follow-up visits, the treatment plan of the next stage, and home care precautions. It is distributed to patients, and instructed patients and their families to strictly follow the contents of the manual for out-of-hospital treatment. Regular follow-up visits are made to patients through phone calls, WeChat videos, etc., and patients are encouraged to take appropriate outdoor sports and actively integrate into society.

Application effect evaluation scale

Four common used scale were used in this study to evaluate the intervention effect of the people-oriented nursing mode. The Self-Rating Anxiety Scale (SAS) developed earlier (7) was used to evaluate the subjective feelings of anxiety of patients and their changes during treatment. It contains 20 items and is divided into 4 grades, with 50-59 as mild anxiety, 60-69 as moderate anxiety, and 70 points or more as severe anxiety. The Self-rating depression scale (SDS) is a self-rating scale with 20 items divided into 4 grades, with 50-59 as mild depression, 60-69 as moderate depression, and 70 points or more as severe depression. It is derived from the depression scale (8). The quality of life scale was first published in 1995 by Dr. Cohen et al. from McGill University in Canada (9). It is one of the most widely used scales to measure the quality of life of patients in the palliative care stage. There are 16 items measuring four different dimensions of physical, psychological, existential, and support. The overall reliability and validity of the scale and each dimension are robust (Cronbach α=0.83). The items are scored using a 0-10 numerical scoring method. 0 to 10 represent varying degrees from one extreme description to another, with higher scores representing better quality of life. The Visual Analogue Scale (VAS) is currently the most commonly used scale for evaluating the pain degree of patients in China. Patients score from 0 to 10 according to their own pain conditions, with 0 being no pain and 10 being the most severe pain.

Observational indicators

Immediately after admission and before discharge, the nurse in charge assisted the patient to fill in and collect the above scale forms to evaluate the anxiety and depression score, quality of life score, and pain score of the individuals included.

Quality control

Before the start of the trial, the members of the people-oriented nursing team formulate a people-oriented nursing process, determine the specific content of nursing, and conduct teaching training based on this. The training content includes: the purpose of the trial, the process, the specific filling method of the evaluation scale, the precautions of forms to be filled in and the meaning of each item, etc. After the training, the responsible nurse in charge of the implementation of the test needs to be assessed, and only after passing the assessment can they be enrolled in the trial. Two nurses in charge were responsible for input and analysis of the data collected from the scale form, and the statistical results of the two were checked until they were completely consistent. The trial was supervised by the head nurse.

Statistical Analysis

The data collected in this study were all analyzed by SPSS 22.0 (IBM Corp., Armonk, NY, USA), quantitate data were described as mean ± standard deviation, and independent samples *t*-test was used for comparison between groups. The qualitative data were expressed as ratio or rate, and the comparison between groups was performed by chi-square test. $P < 0.05$ was considered as the difference was statistically significant.

Results

Comparison of the basic characteristics between the experiment and control group

There was no statistically significant difference in general data between the two groups of patients, indicating they were comparable (Table 1).

Table 1: Comparison of general information of patients

Variable		*Experimental group（n=40）*	*Control group（n=40）*	*P*	*t*
Gender（n）	Male	21	20	0.093	0.759
	Female	19	20		
Age($\bar{x}\pm s$)		63.27±5.13	64.19±4.17	0.997	0.319
Profession	Public officials	8	7		
	Worker	21	22		
	Farmer	5	4		
	Unemployed	6	7		
Educational level（n）	Primary school	19	20	2.938	0.230
	Middle school	10	11		
	College and above	11	9		
Cost Category（n）	Medical insurance	32	30	0.379	0.538
	Rural cooperative	6	7		
	at own expense	2	3		
Course of disease（month）		10.08±3.25	10.26±3.97	2.096	0.305
Hospital day（day）		18.21±3.41	19.03±3.28	1.096	0.276

Comparison of anxiety and depression scores between the two groups of patients

There was no significant difference in the SAS score and SDS score between the two groups on admission. There were statistically significant differences in the SAS score and SDS score of each group of patients at the time of admission and discharge and statistically significant differences between the two groups at the time of discharge, respectively (Table 2).

Table 2: Comparison of anxiety and depression scores between the two groups of patients

Groups	*SAS*		*t*	*P*	*SDS*		*t*	*P*
	Admission	Discharge			Admission	Discharge		
Control group	67.23±3.64	55.18±3.02	16.113	0.001	71.25±3.07	55.16±3.75	20.997	0.001
Experimental group	67.57±4.01	21.15±2.52	61.989	0.001	72.16±2.96	21.03±2.18	87.965	0.001
t	0.379	54.718			1.349	49.764		
P	0.692	0.001			0.181	0.001		

Comparison of pain scores between the two groups of patients

There was no statistically significant difference in the admission pain scores between the two groups, but there was a statistically significant difference in the scores at the time of discharge, and the scores in the experimental group were lower than those in the control group (Table 3).

Table 3: Comparison of pain scores between the two groups of patients

Groups	*Admission*	*Discharge*	*t*	*P*
Control group	8.33±2.16	5.71±2.68	4.814	0.001
Experimental group	8.47±2.28	3.15±2.08	10.902	0.001
t	0.281	4.772		
P	0.778	0.000		

Comparison of quality of life scores between the two groups of patients

There was no significant difference in the scores of each dimension between the two groups at admission, but there was a statistically significant difference in the scores at discharge, and the scores of the patients in the experimental group were better than those in the control group. There were statistically significant differences in the admission and discharge scores within the two groups of patients, and the scores at discharge were better than those at admission (Tables 4 and 5).

Table 4: Comparison of quality of physiological dimension and psychological dimension between the two groups of patients

Groups	*Physiological dimension*		*T*	*P*	*Psychological dimension*		*T*	*P*
	Admission	Discharge			Admission	Discharge		
Control group	17.12±2.64	20.32±2.49	5.576	0.000	15.28±2.26	19.26±3.03	6.659	0.001
Experimental group	17.57±3.01	37.19±3.15	28.480	0.000	15.15±2.67	32.54±2.77	20.458	0. 001
T	0.710	26.572			0.235	28.603		
P	0.479	0. 001			0.841	0. 001		

Table 5: Comparison of quality of Spiritual dimension and social support dimension between the two groups of patients

Groups	*Spiritual dimension*		*t*	*P*	*Social support dimension*		*t*	*P*
	Admission	Discharge			Admission	Discharge		
Control group	14.39±3.13	17.58±3.75	4.457	0.000	15.16±3.22	20.13±3.15	6.978	0. 001
Experimental group	14.58±3.27	31.41±3.03	23.876	0.000	14.15±2.42	31.24±2.44	34.451	0. 001
t	0.265	19.620			0.628	17.634		
P	0.791	0. 001			0.107	0. 001		

Discussion

The people-oriented nursing model can effectively reduce the negative emotions of patients

According to the score results of the anxiety and depression self-rating scale, we found that the two groups of patients had relatively serious anxiety and depression when they were admitted to the hospital, which may be related to the longer course of the disease and greater physical and psychological pressure of the patients (10-12). After the intervention of the people-oriented nursing mode, the above-mentioned negative emotions were significantly alleviated, and the scores on the anxiety and depression self-rating scale were significantly decreased, indicating that the people-oriented nursing mode exert a positive on relieving the anxiety and depression of the patient.

The reasons may be interpreted as the following: 1) The people-oriented nursing mode can simulate a family-like hospital environment for patients during hospitalization, reduce their fear of being hospitalized, and shorten their hospitalization adaptation time; 2) The nursing mode focuses on the psychological care of patients, which is the most neglected part of the conventional nursing mode. At the time of admission, the psychological state of patients was accurately assessed, which will assist the psychologists to conduct psychological intervention. 3) Compared with the control group, the nursing staff in the experimental group communicated with patients in a gentler tone and talked more frequently, which made these patients feel the warmth of the nursing staff. Compared with the conventional cold and mechanical communication, this mode can enhance the confidence of patients in overcoming the disease and increase their cooperation during treatment (13); 4) The patients in the experimental group will receive the discharge handbook when they are discharged. The handbook can record the precautions and review time in detail, which may enable the patient to realize their importance in the heart of the medical staff, and increase their confidence in cure.

The people-oriented nursing model can effectively relieve the pain of patients

Pain is an insufferable complication affecting postoperative rehabilitation of patients with bladder cancer, and its severity directly affects the confidence and cooperation during treatment of the disease (14-17). In this study, the pain scores of the patients in the experimental group at discharge were significantly lower than those in the control group, which suggested that the people-oriented nursing mode adopted by the experimental group had a positive effect on the pain relief of the patients. The multi-mode analgesic care adopted by the experimental group not only relies on the analgesic effect of drugs, but also incorporates psychological analgesia, which could reduce the potential complication caused by analgesic drugs to patients. What's more, it improves the patient's tolerance to pain, and the reduction of the pain improves the quality of life to a certain extent and promotes the recovery process of the disease in reverse.

The people-oriented nursing model enhances the life quality of patients

According to the finding of this study, the scores of the quality of life scale of the patients in the two groups were at a low level when they were admitted to the hospital, which indicating that the psychological and physical conditions of patients were poorer, mental exhaustion, and their social support levels were lower (18-20). After hospitalization, the above scores have all improved. On the one hand, the disease may be effectively controlled after the treatment, and the physical and psychological torture of the disease on the patient is temporarily relieved. On the other hand, after hospitalization, the patient is valued by his family. The increase of the degree may relieve the psychological pressure of the patient to a certain extent and increase the level of social support. Comparing the scores of each domains of the quality of life of the patients in the two groups, we found that the improvement of the score in experimental group was significantly higher than that in the control group, which may be related to

the nursing mode adopted by the experimental group. It not only pays attention to the nursing of the disease as usual, but also focus on relieving the pain of the patients. The patients in the experimental group adopted multi-mode analgesia nursing, which demonstrated that this kind of nursing mode can significantly reduce the perioperative pain of surgical patients and improve their life quality.

Conclusion

The people-oriented nursing model could reduce the negative emotions, relieve pain, and improve the quality of life of patients with bladder cancer. It is a promising nursing model and can be popularized and applied in clinical practice in the future.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

This study was financially supported by Qiqihar Science and Technology Project (CSFGG-2021326), People-Oriented nursing mode on the negative emotions and psychological status of patients with bladder cancer.

Conflict of Interest

The authors declare that there is no conflict of interest.

References

1. Deuker M, Stolzenbach LF, Collà Ruvolo C, et al (2021). Micropapillary Versus Urothelial Carcinoma of the Urinary Bladder: Stage at Presentation and Efficacy of Chemotherapy Across All Stages-A SEER-based Study. *Eur Urol Focus,* 7(6): 1332-1338.
2. Lindskrog SV, Prip F, Lamy P, et al (2021). An integrated multi-omics analysis identifies prognostic molecular subtypes of non-muscle-invasive bladder cancer. *Nat Commun,* 12(1): 2301.
3. Rouanne M, Bajorin DF, Hannan R, et al (2020). Rationale and Outcomes for Neoadjuvant Immunotherapy in Urothelial Carcinoma of the Bladder. *Eur Urol Oncol,* 3(6): 728-738.
4. Gore JL (2018). Patient-Centered Outcomes in Bladder Cancer. *Curr Urol Rep,* 19(12): 105.
5. Mohamed NE, Chaoprang Herrera P, et al (2014). Muscle invasive bladder cancer: examining survivor burden and unmet needs. *J Urol,* 191(1): 48-53.
6. Pham H, Torres H, Sharma P (2019). Mental health implications in bladder cancer patients: A review. *Urol Oncol,* 37(2): 97-107.
7. Buurman BM, van Munster BC, Korevaar JC, de Haan RJ, de Rooij SE (2011). Variability in measuring (instrumental) activities of daily living functioning and functional decline in hospitalized older medical patients: a systematic review. *J Clin Epidemiol,* 64(6): 619-27.
8. Kress JP, Pohlman AS, O'Connor MF, Hall JB (2000). Daily interruption of sedative infusions in critically ill patients undergoing mechanical ventilation. *N Engl J Med,* 342(20): 1471-7.
9. Luo Y, He M, Li C, Yang H (2019). A research on quality of life score (QOLS) of patients with trigeminal neuralgia (TN). *J Infect Public Health,* 12(5): 690-694.
10. Friend AJ, Feltbower RG, Hughes EJ, Dye KP, Glaser AW (2018). Mental health of long-term survivors of childhood and young adult cancer: A systematic review. *Int J Cancer,* 143(6): 1279-1286.
11. Grassi L, Riba M (2020). Cancer and severe mental illness: Bi-directional problems and potential solutions. *Psychooncology,* 29(10): 1445-1451.
12. Ismail MF, Lavelle C, Cassidy EM (2017). Steroid-induced mental disorders in cancer patients: a systematic review. *Future Oncol,* 13(29): 2719-2731.
13. Fernando A (2020). Mental Health and Cancer: Why it is time to innovate and integrate-A call

to action. *Eur Urol Focus,* 6(6): 1165-1167.
14. Deng G (2019). Integrative Medicine Therapies for Pain Management in Cancer Patients. *Cancer J,* 25(5): 343-348.
15. Fink RM, Gallagher E (2019). Cancer Pain Assessment and Measurement. *Semin Oncol Nurs,* 35(3): 229-234.
16. Swarm RA, Paice JA, Anghelescu DL, et al (2019). Adult Cancer Pain, Version 3.2019, NCCN Clinical Practice Guidelines in Oncology. *J Natl Compr Canc Netw,* 17(8): 977-1007.
17. Yang J, Wahner-Roedler DL, Zhou X, et al (2021). Acupuncture for palliative cancer pain management: systematic review. *BMJ Support Palliat Care,* 11(3): 264-270.
18. Kadambi S, Soto-Perez-de-Celis E, Garg T, et al (2020). Social support for older adults with cancer: Young International Society of Geriatric Oncology review paper. *J Geriatr Oncol,* 11(2): 217-224.
19. Korotkin BD, Hoerger M, Voorhees S, et al (2019). Social support in cancer: How do patients want us to help? *J Psychosoc Oncol,* 37(6): 699-712.
20. McDonough MH, Beselt LJ, Kronlund LJ, et al (2021). Social support and physical activity for cancer survivors: a qualitative review and meta-study. *J Cancer Surviv,* 15(5): 713-728.