


The effect of seamless nursing combined with Roy adaptive psychological nursing on self-efficacy and bad mood of patients after acute abdomen surgery

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Abstract

To explore the effect of seamless nursing combined with Roy adaptive psychological nursing on self-efficacy and bad mood of patients after acute abdomen surgery. According to the digital table method, 120 patients with acute abdomen who were treated and nursed in our hospital from June 2019 to June 2021 were selected as prospective research objects, and they were divided into a control group and an observation group with 60 cases each. Among them, the control group carried out seamless nursing, and the observation group carried out Roy adaptive psychological nursing on this basis, and compared the effects of self-efficacy, nursing ability and bad mood of the 2 groups of patients after surgery. Before nursing, the self-efficacy scale, quality of life scores, nursing ability scores, as well as bad mood were not statistically significant between the 2 groups ($P > .05$). After nursing, the self-efficacy scale and nursing ability scores in the observation group were significantly higher than that in the control group ($P < .05$); the social interaction score, anxiety score and depression score were significantly lower than that in the control group ($P < .001$). Seamless nursing combined with Roy adaptive psychological nursing can effectively improve the quality of life of patients after acute abdomen surgery, reduce unhealthy emotions, and improve the nursing ability and self-efficacy of patients after surgery. It has a certain reference for the nursing of patients after acute abdomen surgery.

Keywords: acute abdomen, bad mood, Roy adaptive psychological care, self-efficacy

1. Introduction

Acute abdomen refers to a group of clinical syndromes in which acute pathological changes occur in the abdominal cavity, pelvic cavity, and retroperitoneal tissues, which induce symptoms and signs mainly in the abdomen, and are accompanied by systemic reactions, such as acute appendicitis, acute perforation of ulcer disease, and acute biliary tract infection, acute intestinal obstruction, acute pancreatitis, and other disease types are more common.^[1] Studies have shown that acute abdomen has rapid onset, rapid progress, complex and changeable conditions, and high mortality, which are issues that clinical medical workers need to pay attention to.^[2] Reports have shown that optimizing the emergency care model and shortening the time for triage, diagnosis and surgical preparation are the keys to improving the success rate of emergency patients with acute abdomen.^[3] Although conventional emergency care can play a certain role through measures such as establishing green channels and standardizing

nursing management, there are still shortcomings such as delays in the connection of various links. The seamless nursing model refers to an optimized intervention plan that can effectively make up for the shortcomings of the conventional nursing model, but there are still many shortcomings.^[4] The Roy adaptation model was proposed by the American nursing scientist Roy, which is based on improving the patient's ability to adapt.^[5] Through the 2-level assessment to understand the stimulus factors that cause the patient's onset or aggravation of symptoms and the positive factors that are conducive to the patient's recovery, medical staff take the initiative to carry out relevant interventions to reduce negative stimulus factors and increase positive stimulus factors, thereby improving patients' symptoms and improving their health. A medical model.^[6] In recent years, Roy adaptation model has played an important role in the treatment of many diseases and can effectively make up for the lack of seamless care. Therefore, this study explores the effect of seamless nursing combined with Roy adaptive psychological nursing on the self-efficacy and bad

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mood of patients after acute abdomen surgery, and provides a certain reference for clinical nursing after acute abdomen surgery.

2. Materials and Methods

2.1. Research objective

In this study, patients and their families have been informed to sign an informed consent form. According to the digital table method, 120 patients with acute abdomen who were treated and nursed in our hospital from June 2019 to June 2021 were selected as prospective research objects. The patients were numbered and randomized using the number table method of the third edition of "Medical Statistics,"^[7] and they were divided into a control group and an observation group with 60 cases each. In the observation group, there were 28 males and 32 females, aged 25 to 73 (49.93 ± 10.19) years old, body mass index 19.2 to 28.5 (23.32 ± 2.59) kg/m². In the control group, there were 20 males and 40 females, aged 21 to 71 (66.48 ± 9.37) years old, body mass index 19.0 to 28.7 (23.33 ± 2.51) kg/m². There was no statistically significant difference in baseline information between the 2 groups ($P > .05$), and they were comparable. This study was reviewed and approved by the Medical Ethics Review Committee of WuHan NO.1 Hospital.

2.2. Inclusion and exclusion criteria

Inclusion criteria: all selected patients meet the diagnostic criteria of "Clinical Thinking on the Diagnosis and Differential Diagnosis of Surgical Acute Abdomen,"^[8] and the patients after acute abdomen have clear consciousness and can speak normally; there are both typical symptoms of acute abdomen, and there is at least 1 accompanying family member; the patients and their family members have good compliance; the patients are all adult patients, and the patients and (or) accompanying family members are aware of this study. Exclusion criteria: those with other types of diseases, such as endocrine diseases, cardiovascular and cerebrovascular diseases, etc; those with mental disorders, such as depression, bipolar disorder, etc; those with severe trauma, such as severe head injury, thoracolumbar fracture, etc, history of drug allergy, and history of major surgery.

2.3. Methods

2.3.1. Seamless care. After receiving the consultation, you should have a general understanding of the patient's condition information, enter the keywords of the condition information in the behavioral decision analysis system, such as colic, shock, bleeding, etc, perform pre-examination and triage according to the derived type of possible acute abdomen, and pass the system sends the analysis results to the nursing staff working system involved in emergency care, and reminds relevant departments that need to cooperate to open a green channel to facilitate and quickly complete various related examinations for the patient in order to confirm the diagnosis in time; at the same time, the nursing staff according to the information system. It is reminded to explain the patient's condition and treatment to the accompanying members of the family, soothe their emotions and ask them to cooperate with the rescue of the patient, promptly go through relevant procedures, etc; emergency department nurses also need to prepare for emergency surgery according to the patient's behavior decision analysis system. Provide the main information of the patient to the personnel of the relevant departments involved in the emergency, so that the relevant personnel can complete the emergency work in an orderly and close manner, and use the patient behavior decision analysis system to understand the common complications and the common complications after the emergency operation of

various types of acute abdomen nursing points: actively control various risk factors for poor prognosis, stabilize the patient's mood, improve their physical and mental state, and promote their early recovery.

2.3.2. Roy adapts to psychological care. Self-concept: Patients are prone to doubt, anxiety, panic, and other emotions due to lack of basic understanding of disease and surgical treatment. Nursing staff will explain to patients the relevant knowledge of disease, surgery and nursing and the necessity of implementation once every 4 days for no less than 30 minutes, so as to alleviate their negative emotions and promote the improvement of patient cooperation. Before surgery, use video or text to introduce surgery-related knowledge to patients, and inform them of the possible complications and risks of surgery, and conduct knowledge dissemination to them and inform them of relevant precautions, so that patients can know their minds and reduce anxiety. Answer the questions raised by the patient seriously, and try to satisfy their reasonable psychological needs. After the operation, patients should also be instructed to train the pelvic floor muscles and abdominal muscles, and the importance of training should be informed to improve compliance. Physiological function: The patient is prone to changes in biological rhythm and body function due to the influence of pain, and the unfamiliar environment of the hospital at the time of admission can easily increase their negative emotions such as depression and anxiety. Nursing staff should actively communicate with patients and create a quiet and warm hospitalization environment for them, pay attention to adjusting the temperature and humidity of the ward, use soft and coordinated colors to match, avoid strong light to stimulate the vision of patients, and instruct them to take rest. Nursing staff should be gentle when performing various operations to reduce noise. For some patients with severe pain, analgesics can be given under the guidance of a physician. Give care and care to patients in daily life, and instruct family members not to stimulate them to ensure blood stability. Mutual trust: patients are extremely susceptible to the influence of medical equipment, environment, various invasive operations and drugs during hospitalization, resulting in irritability, disgust and other emotions, and reducing their treatment compliance. In addition, the patient's mood changes after hospitalization, and the dependence on relatives, friends and medical staff is serious. Therefore, medical staff and family members should give patients more emotional support to promote their sense of security. Nurses should use easy-to-understand methods when communicating with patients. The language, and the attitude should be sincere and friendly, enhance the patient's favorability, and improve their treatment compliance. Role function: postoperative pain will affect the mood of the patient. Nursing staff should give patients encouragement and comfort, encourage patients to tell their true feelings, and do their ideological work, and at the same time inform their family members to care more about patients to help them face the disease positively.

2.4. Observation indicators

The study was followed up for 1 month without shedding and withdrawal. The self-efficacy, nursing ability and negative emotions of the 2 groups of patients were observed before and after nursing. (1) Self-efficacy: The self-efficacy scale was used to evaluate the self-efficacy of the 2 groups of hemodialysis patients after nursing. The content mainly includes physical function, pain management, and symptom response. The higher score showed the patient have stronger the self-efficacy. The internal consistency reliability coefficient of the scale is 0.896, the Guttman split-half reliability is 0.763 to 0.896, and the test-retest reliability is 0.810 to 0.902. Life quality score includes 4 parts: mental vitality score, social interaction score, emotional restriction score, and

mental status score. Each part is scored from 0 to 100 points. The higher the score showed the better the quality of life of patients. Self-care ability assessment form includes 46 items in 4 dimensions, namely health knowledge level (14 items), self-care skills (12 items), self-care responsibility (8 items), and self-concept (9 items). Each item has 5 points, 11 of which are reverse scores, with a full score of 172 points. The higher the score showed the stronger the self-care ability. The Self-Rating Anxiety Scale evaluates the changes in the anxiety of the 2 groups of patients. The scale contains 20 items, with a score of 0 to 100 points, and a score <50 is normal. The lower the score showed the lesser the anxiety of the patients. Self-Rating Depression Scale contains 20 items, with a score of 0 to 100 points, and a score <50 is normal. The higher the score showed the more severe the patient's depression. The Cronbach α values measured on the above scales before use were all >0.914. The patient fills in independently without being affected by any internal or external factors, and the test will be completed within 60 minutes.

2.5. Statistical methods

Use Epidata to enter all the data, and then use SPSS 25.0 to statistically process the data. The data needs to be entered into a computer database by a second person to ensure the completeness and accuracy of the data. The measurement data represented by the means \pm standard deviation using the one-way variance test, and the counting data represented by the percentage (%) using the χ^2 test. $P < .05$ indicated a statistically significant difference.

3. Results

3.1. Comparison of self-efficacy

Before nursing, the self-efficacy scale was not statistically significant between the 2 groups ($P > .05$). After nursing, the physical function score, pain management score, and symptom response score in the observation group were significantly higher than that in the control group ($P < .001$) (Table 1).

3.2. Comparison of quality-of-life scores

Before nursing, the quality-of-life scores were not statistically significant between the 2 groups ($P > .05$). After nursing, the mental vitality score, emotional restriction score, and mental status in the observation group were significantly higher than that in the control group ($P < .05$) (Table 2). However, social interaction score in the observation group were significantly lower than that in the control group ($P < .001$).

3.3. Comparison of nursing ability and anxiety and depression scores

Before nursing, the difference in nursing ability and anxiety and depression scores between the 2 groups was not statistically

significant ($P > .05$). After nursing, the health knowledge level, self-care skills, self-care responsibility, and self-concept in the observation group were significantly higher than that in the control group ($P < .001$) (Tables 3 and 4). And the anxiety and depression scores in the observation group were significantly higher than that in the control group ($P < .001$).

4. Discussion

There are many types of acute abdomen, the onset is rapid, and most patients have severe abdominal pain, lacking typical and specific clinical manifestations, and it is easy to miss the best treatment opportunity, leading to aggravation of the disease, and even serious life-threatening complications.^[9] Conventional emergency care can use the green channel to help emergency patients with acute abdomen to quickly complete the examination and receive symptomatic supportive treatment in time, thereby improving the efficiency of rescue.^[10] However, this nursing model is difficult to pre-check and triage, and it is easy to delay the timing of treatment, and the emergency cooperation between relevant departments and doctors is delayed, which increases the risk of rescue failure.^[11] In addition, conventional emergency care is difficult to provide a systematic reference for the selection of patient care measures. The implementation of relevant nursing measures mainly relies on the work experience of emergency nurses, lacking pertinence and science, and can also increase the risk of rescue failure.^[12] Actively discussing the ideal emergency care model for patients with acute abdomen to shorten the delay time of the emergency and improve the success rate of emergency treatment is a problem that the emergency department nurses need to consider seriously.^[13] Seamless care is to construct a decision analysis system based on patient behavior by analyzing the electronic medical record information of emergency patients with acute abdomen admitted in the past. The Roy adaptation model mainly discusses the adaptation process of human beings to various external levels and many stimuli as an adaptive system. The core idea of the Roy adaptation model is to regard the human life process as a co-stimulation of the internal environment and the external environment, and on this basis, psychological and physical cognitive interventions for patients.^[15] After evaluating the patients' main stimuli, related stimuli, and inherent stimuli, the nursing staff find out the related influencing factors, and formulate targeted nursing plans for the patients, so as to help the patients alleviate their psychological conditions and promote their psychological adaptability.^[16] Existing research reports have confirmed that the Roy model applied to the treatment of many diseases has a positive significance in improving patients' treatment attitudes and enhancing treatment effects.^[17] This study first carried out a 2-level assessment of patients to understand the causes of their negative emotions such as anxiety and depression, and then to find out the stimulus factors that are conducive to recovery and those that are not conducive to recovery. In the intervention stage, according to the different characteristics of patients, specific intervention measures such as health education, diversified communication activities, and targeted consultations are

Table 1
Comparison of self-efficacy between the 2 groups (means \pm SD).

Group	Physical function score		Pain management score		Symptom response score	
	Before care	After care	Before care	After care	Before care	After care
Control group (60)	14.34 \pm 3.25	24.25 \pm 6.82	8.23 \pm 2.57	10.79 \pm 3.14	9.16 \pm 2.15	19.45 \pm 5.15
Observation group (60)	14.73 \pm 2.21	33.27 \pm 8.31	7.94 \pm 1.53	15.23 \pm 4.26	8.95 \pm 2.26	25.03 \pm 8.16
<i>t</i>	0.769	-6.499	0.751	-6.499	0.521	-4.479
<i>P</i>	.444	<.001	.454	<.001	.603	<.001

SD = standard deviation.

Table 2**Comparison of quality-of-life scores between the 2 groups (means ± SD).**

Group	Mental vitality score		Social interaction score		Emotional restriction score		Mental status score	
	Before care	After care	Before care	After care	Before care	After care	Before care	After care
Control group (60)	55.30 ± 8.23	87.77 ± 6.74	54.32 ± 4.25	91.25 ± 6.82	68.23 ± 10.57	94.07 ± 10.14	67.76 ± 9.15	83.45 ± 12.15
Observation group (60)	55.29 ± 8.22	95.37 ± 7.20	53.89 ± 4.21	83.27 ± 8.31	67.24 ± 10.53	98.23 ± 10.26	68.75 ± 9.26	91.03 ± 11.16
<i>t</i>	0.007	-5.969	0.557	5.75	0.514	-2.234	0.589	-3.559
<i>P</i>	.995	<.001	.579	<.001	.608	.027	.557	.001

SD = standard deviation.

Table 3**Comparison of nursing ability scores between the 2 groups (means ± SD).**

Group	Health knowledge level		Self-care skills		Sense of responsibility	
	Before care	After care	Before care	After care	Before care	After care
Control group (60)	66.40 ± 2.26	65.27 ± 2.14	22.64 ± 6.25	24.25 ± 7.82	12.61 ± 2.51	16.06 ± 2.24
Observation group (60)	66.45 ± 2.22	68.67 ± 4.20	22.66 ± 6.24	61.27 ± 7.61	12.60 ± 2.52	26.65 ± 1.26
<i>t</i>	-0.251	-10.689	0.018	-10.669	0.044	-45.064
<i>P</i>	.802	<.001	.986	<.001	.965	<.001

SD = standard deviation.

Table 4**Comparison of nursing ability and anxiety and depression scores between the 2 groups (means ± SD).**

Group	Self-concept		Anxiety score		Depression score	
	Before care	After care	Before care	After care	Before care	After care
Control group (60)	15.40 ± 2.18	18.27 ± 2.29	68.64 ± 5.21	54.25 ± 7.65	62.61 ± 7.48	49.06 ± 6.21
Observation group (60)	15.45 ± 2.27	24.67 ± 1.65	68.66 ± 5.28	47.27 ± 9.66	62.60 ± 7.49	42.65 ± 6.19
<i>t</i>	0.251	-26.282	0.021	9.292	0.015	26.669
<i>P</i>	.802	<.001	.986	<.001	.988	<.001

SD = standard deviation.

carried out, in order to achieve a good psychological state of the patients and improve the effect of depressive symptoms.^[18]

The physical function scores, pain management scores, and symptom response scores of the observation group after nursing in this study were significantly higher than those of the control group, indicating that seamless nursing combined with Roy adaptive psychological nursing can effectively improve the self-efficacy of patients after acute abdomen surgery. The reasons for the analysis are as follows. According to the research theory of BNDURA, self-efficacy is related to the psychological manifestations of self-confidence, anxiety, depression, helplessness, and fear that individuals show when facing various external environments.^[19] Self-efficacy refers to the judgment and speculation of an individual's ability to complete a certain behavior. It is also a decisive factor for the human body to perform certain behaviors. People with a strong sense of self-efficacy are full of confidence in all difficulties, that is, patients. The stronger the sense of self-efficacy, the more ideal the confidence in disease treatment, and the higher the compliance with treatment and nursing implementation.^[20] By strengthening communication and exchanges with patients, nurses patiently listen to the patient's statements, earnestly answer patients' questions and correct guidance, promote harmony between nurses and patients, alleviate patients' psychological burden, and adopt encouraging language to enhance their confidence in overcoming the disease; explain the condition carefully to the patient, explain patiently, correct the patient's previous wrong cognitive concepts, and guide how to develop the correct coping style.^[21] Use clinically successful cases to encourage patients, guide them to adjust their life patterns, cultivate good living habits, and

regularly exercise daily to improve their sense of self-efficacy. It can be seen that improving the self-efficacy of patients is critical to speeding up the recovery of patients after surgery.

The mental vitality score, social interaction score, emotional restriction score, and mental status of the observation group after nursing in this study were significantly higher than those of the control group, indicating that seamless nursing combined with Roy adaptive psychological nursing can effectively improve the quality of life of patients after acute abdomen surgery. Through the development of seamless nursing combined with Roy adaptive psychological nursing intervention, the patients' bad cognition is changed, and cognitive reconstruction is carried out, so that the patients can consciously get rid of the unstable factors in daily life, and adopt relaxation techniques to effectively deal with all aspects of pressure, and then establish healthy behavior and psychological methods can effectively improve the quality of life of patients.^[22]

In this study, the health knowledge level, self-care skills, self-care responsibility, and self-concept of the observation group after nursing in this study were higher than those of the control group, while the score of depression and mood disorder was significantly lower than that of the control group, indicating that seamless nursing combined with Roy adaptive psychological nursing can effectively improve self-care ability of patients after acute abdomen surgery. This may be related to the following advantages of Roy adaptation model: after the patient's physiological and psychological adaptation mechanism is strengthened, the scope of adaptation continues to expand, and its ability to tolerate stimuli increases. The Roy adaptation model well controls the primary and

secondary stimuli related to the patient, so that the patient's body adaptability is maintained within its acceptable range, so as to avoid adverse stimuli from affecting the body or minimize the impact.^[23] The individual support and encouragement mechanism implemented during nursing can help patients face stimuli correctly, increase and maintain individual adaptive responses, thereby promoting the improvement of patients' unhealthy emotions, enhancing self-care ability and self-efficacy.^[24]

This research is innovative and has some limitations. First of all, this study included patients with acute abdomen surgery that were not classified into acute appendicitis, acute perforation of ulcer disease, acute biliary infection, acute intestinal obstruction, acute pancreatitis, etc after acute abdomen surgery, seamless nursing combined with Roy adaptive psychological care to evaluate patients after acute abdomen surgery, self-efficacy, and negative emotions. Secondly, the selected patients are all patients who are treated or cared for in our hospital, so the selection of patients to be excluded is subjective, and the results of the study may be unrepresentative or biased. Finally, this study only discusses the self-efficacy and unhealthy emotions of patients with acute abdomen surgery by seamless nursing combined with Roy adaptive psychological care. Rehabilitation after post-care.

In summary, seamless nursing combined with Roy adaptive psychological care can effectively improve the quality of life of patients after acute abdomen surgery, reduce unhealthy emotions, improve postoperative nursing ability and sense of self-efficacy, and provide nursing care for patients after acute abdomen surgery.

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