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Case Control Study

Narrative nursing for negative emotions in patients with acute pancreatitis: Based on model construction and application

Narrative nursing of acute pancreatitis

Abstract

BACKGROUND

Acute pancreatitis, as a common acute abdomen disease, has a high incidence rate worldwide and is often accompanied by severe complications. Negative emotions lead to increased secretion of stress hormones, elevated blood sugar levels, and enhanced insulin resistance, which in turn increases the risk of acute pancreatitis and significantly affects the patient's quality of life. Therefore, exploring the intervention effects of narrative nursing programs on the negative emotions of patients with acute pancreatitis is not only helpful in alleviating psychological stress and improving quality of life but also has significant implications for improving disease outcomes and prognosis.

AIM

To construct a narrative nursing model for negative emotions in patients with acute pancreatitis and verify its efficacy in application.

METHODS

Through Delphi expert consultation, a narrative nursing model for negative emotions in patients with acute pancreatitis was constructed. A non-randomized quasi-experimental study design was used in this study. A total of 92 patients with acute

pancreatitis with negative emotions admitted to a tertiary hospital in Nantong City of Jiangsu Province, China from September 2022 to August 2023 were recruited by convenience sampling, among whom 46 patients admitted from September 2022 to February 2023 were included in the observation group, and 46 patients from March to August 2023 were selected as control group. The observation group received narrative nursing plan, while the control group was given with routine nursing. Self-rating anxiety scale (SAS), Self-rating depression scale (SDS), Positive and Negative Affect Scale (PANAS), Caring Behavior Scale, patient satisfaction scale and 36-item short-form health survey scale (SF-36) were used to evaluate their emotions, satisfaction and caring behaviors in the two groups on the day of discharge, 1- and 3-month following discharge.

RESULTS

According to the inclusion and exclusion criteria, a total of 45 cases in the intervention group and 44 cases in the control group eventually recruited and completed in the study. On the day of discharge, the intervention group showed significantly lower scores of SAS, SDS and negative emotion (28.57 ± 4.52 vs 17.4 ± 4.44 , $P < 0.001$), whereas evidently higher outcomes in the positive emotion score, Caring behavior scale score and satisfaction score compared to the control group ($P < 0.05$). Repeated measurement analysis of variance showed that significant between-group differences were found in time effect, inter-group effect and interaction effect of SAS and PANAS scores as well as in time effect and inter-group effect of SF-36 scores ($P < 0.05$); the SF-36 scores of two groups at 3 months after discharge were higher than those at 1 month after discharge ($P < 0.05$).

CONCLUSION

The application of narrative nursing protocols has demonstrated significant effectiveness in alleviating anxiety, ameliorating negative emotions, and enhancing satisfaction among patients with acute pancreatitis.

Key Words: Acute pancreatitis; Negative emotions; Narrative nursing model; Adverse emotions; Self-rating anxiety scale; Self-rating depression scale

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Core Tip: The implementation of narrative nursing programs for patients with AP exerts positive effects in improving negative emotions, significantly enhancing their experience during hospitalization, and altering negative perception for clinical nursing work.

INTRODUCTION

With the increasingly fast pace of life and prevalence of food supply in variety, the incidence rate of acute pancreatitis (AP) has been rising year by year, ranging from 4.9 to 73.4 per ten thousand people[1,2]. Patients with AP frequently manifest acute onset, and are often accompanied by severe and persistent upper abdominal pain, abdominal distension, nausea, vomiting, and other symptoms, and some patients may additionally experience shock manifestations such as tachycardia, hypotension, and oliguria. Generally, routine nursing procedures during treatment involving in gastric tube placement, oxygen inhalation, monitoring, and nasogastric feeding, *etc.* are often in absent of verbal communication, which can easily exert adverse impacts on their recovery[3]. In clinic, these patients often present adverse emotions, including basic emotions of depression, anxiety, sadness, and fear, as well as various complex emotions involving shame, pain, disappointment, and guilty. The prevalence of anxiety and depression achieves as high as 33.4% and 36.8%, respectively[4]. These negative emotions are prone to induce increased secretion of stress hormones such as glucagon and growth hormone in the body. The blood glucose levels and glucose metabolism rise

with the increasing of stress, and insulin resistance is enhanced, thereby triggering increased risk of AP onset and recurrence[5,6].

Although patients can perceive the existence of negative emotions, they fail to effectively adjust them, thereby leading to emotional dysregulation and even affecting the normal life for both patients and their families. Centered on feelings of patients, narrative nursing is an approach that utilizes storytelling techniques to understand and intervene in the healthcare experiences of patients who are encouraged to face their problems. In the process, nurses help them to settle the problems *via* listening to their feelings and analyzing their feedbacks, and provide respectful, vibrant, and empathetic care for the patients through reshaping the meaning of life and disease stories[7,8]. Therefore, narrative nursing is of great significance in improving quality of life and enhancing disease outcomes along with prognosis in patients with AP[9].

MATERIALS AND METHODS

CONSTRUCTION OF NARRATIVE NURSING PLAN FOR AP PATIENTS WITH NEGATIVE EMOTION

Literature analysis

Using a literature review method, searches were conducted in databases such as Chinese National Knowledge Infrastructure (CNKI), WanFang Data, VIP database, Baidu Academic, PubMed, and Web of Science to identify relevant articles on the influencing factors, cognitive adjustment, behavioral coping, emotional guidance, and intervention management related to negative emotions in patients with AP. The aim is to establish a conceptual framework and identify key indicators for understanding and addressing these issues. After a thorough discussion among the group members, a preliminary draft of the narrative nursing intervention program for AP patients has been formulated, providing a comprehensive framework for addressing their negative emotions. This program encompasses three key dimensions: Pre-intervention preparation; intervention implementation; risk assessment, quality control and effect evaluation. The program describes the above indicators in details including team

members, teacher qualifications, training content, training methods, assessment methods, intervention timing, intervention forms, intervention content, risk assessment, effect evaluation, and quality control.

Delphi Expert Survey

The Delphi expert survey was conducted involving two rounds of expert surveys, and included 15 experts from 9 provinces and cities of China, including Beijing, Shanghai, Hunan Province, Inner Mongolia, Hubei Province, Jiangsu Province, Shandong Province, Sichuan Province, and Zhejiang Province. Among them, there were 5 experts in narrative nursing and 10 experts in clinical nursing, aged 32 to 59 years old with an average age of 45.80 ± 8.84 years. Six had bachelor's degrees, six had master's degrees, and three had doctorates; there were 12 experts with senior titles and 3 with intermediate titles; work experience ranged from 7 to 37 years, with an average of 23.87 ± 9.80 years. Their average academic attainment level was 0.93, with an average familiarity coefficient (C_s) of 0.84, an average judgment coefficient (C_a) of 0.93, and an authority coefficient (C_r) of 0.90. The effective response rates for the two surveys were 93.8% and 100%, respectively. The coefficients of variation for the importance of two rounds of expert surveys were 0 to 0.38 and 0 to 0.19, while the coefficients of variation for feasibility were 0.05 to 0.39 and 0 to 0.16, with both coefficients of variation less than 0.25, indicating that experts' judgments on the content of each indicator were converging. The coordination coefficients for the importance and feasibility of each indicators were 0.137 and 0.101 in the first round of survey, respectively, and were 0.155 and 0.101, respectively in the second round, with Kendall's Coordination Coefficients for importance and feasibility of less than 0.05 in both rounds of expert consultation questionnaires, showing a statistically significant results and a high level of expert coordination. The above findings suggested that this expert inquiry was in line with the construction procedures of the Delphi expert inquiry, and the construction process of the narrative nursing model for negative emotions in AP patients was scientific and reasonable[10].

APPLICATION OF NARRATIVE NURSING FOR AP PATIENTS WITH NEGATIVE EMOTIONS

Study objects

This study is a Case Control Study. Using the convenience sampling method, AP patients admitted to the gastroenterology department of a Grade III hospital from September 2022 to August 2023 in Nantong City, Jiangsu Province, China were selected as study subjects. They all met the inclusion criteria of follows: Definitely diagnosed as AP; aged 18 years or older; clear consciousness, normal ability in expression, and willingness to participate in the study; signing the informed consent form. The patients who were unable to complete the questionnaire due to severe physical illnesses or other reasons, with neurological diseases, history or family history of mental illness, or severe psychological trauma were excluded from the study. Ultimately, 46 AP patients from September 2022 to February 2023 were recruited as control group, while another 46 AP patients admitted from March 2023 to August 2023 were included in intervention group.

Interventions

Patients in the control group implemented routine psychological care. During the process of treatment, the nurses need to pay attention to the issues and emotions the patients raised and expressed. Simultaneously, corresponding measures were taken to alleviate their feelings of tension, anxiety, pessimism, depression, and other negative emotions related to the disease. It is conducive and necessary to persuading them to overcome the illness by actively encouraging them to maintain confidence. Besides, and providing health education to help them converse of their new roles and adapt hospital environment as soon as possible. The nurse are responsible for helping them gain a deeper understanding of the potential impact of the disease, and closely monitor their emotional changes, and offer routine psychological counseling.

Patients with AP in the intervention group received narrative nursing model for negative emotions. There are three phases in the narrative nursing model. Firstly, both the researchers and clinical nurses participated in the intervention within 48 hours of hospital admission. The aims of the intervention were explained the aims of intervention to the patients, and corresponding measures were taken to soothe feelings of anxiety after assessment of negative emotions. The nurses were responsible to establish close relationships with patients to gain trust and encourage them to actively participate in a variety of activities. The nurses are responsible to engage in active constructive listening to facilitate patients' emotional and physical well-being. This involves a meticulous engagement with patients' narratives, manipulating their representational frameworks to reframe abstract concepts such as "pain" into the figure of a loyal friend. Similarly, medical interventions, taking the insertion of a gastric tube for example, can be metaphorically reconstructed as a collaborative endeavor with a trusted comrade-in-arms. To delve deeper into the therapeutic process, it is imperative to acknowledge and appreciate the patient's socio-cultural milieu. Furthermore, it is of great significance to for healthcare professionals to comprehend their sociocultural background and precisely discern their nonverbal behaviors. Secondly, forty-eight hours post-admission, when the patient's physical condition permits, the researcher initiates a dialogue to address issues such as the patient's emotional state, dietary intake, quality of sleep, bowel movements, psychological needs, pain levels, fasting experiences, and inconveniences encountered since admission. This interactive process is conducive to assist resolving these concerns of patients. The researcher meticulously deconstructs the narrative elements within the patient's stories, paying attention to socio-cultural factors, and responds with empathetic discourse to convey understanding and concern. By delving into the disease narrative to identify facilitators and barriers, the researcher employs compassion to guide the patients towards a more positive emotional and behavioral state. Finally, based on the accumulated trust, preparation, and reflection from the earlier stages, the researchers arrange a conversion in a scheduled time to encourage more complete narratives using questioning and

inspiration methods. The nurse facilitates the externalization of the patient's health issues by using personification techniques (e.g., assigning metaphorical names to diseases, such as "pancreatic sir," "trouble," "calamity," or "it") and encourages reflection on these experiences. The researchers provide feedbacks and emotional support as well as validation as the patient processes their emotions, confronts challenges, and requires affective assistance. The nurse helps the patient to identify and highlight positive exceptions or "flashpoints" within their narrative, focusing on strengths and successes to enhance the patient's self-efficacy, and encourage them to develop a narrative that extends beyond the current illness experience, aiming to envision a future with improved health and well-being.

Data Collection

Upon the patient's admission, the attending nurse is tasked with reviewing the medical records and/or conducting interviews with the research subjects or their relatives on the day of admission, or the following day for those admitted overnight, to compile general information. The data include patient's name, gender, age, duration of hospital stay, educational level, mode of medical payment, social support, whether it is the first episode or not, etiology, and awareness of related health knowledge. This information is to be supplemented prior to discharge. Within 48 hours of admission, the ³ Self-Rating Anxiety Scale (SAS) score, Self-Rating Depression Scale (SDS) score, and Positive and Negative Affect Schedule (PANAS) score are collected as baseline psychological data. Before the patient's discharge, the above scales combined with Caring Behavior Scale and Nursing Satisfaction Scale was administered to them. One month and three months following discharge, the patients were followed up *via* telephone or WeChat to complete the SAS, SDS, PANAS, and 36-item Short Form Health Survey Questionnaire (SF-36).

⁵ ***Statistical Analysis***

Statistical analyses were performed using SPSS Statistics software version 22.0. For continuous variables that are normally distributed and have homogeneity of variances, mean \pm SD were used to represent the data, and *t*-tests were employed for between-group comparison. For categorical variables, frequencies and percentages were used for expression, and χ^2 tests were conducted for between-group comparison. Repeated measures analysis of variance was used to analyze repeated measures data. A *P* value of less than 0.05 was considered to have a statistically significant difference.

RESULTS

General Information

A total of 92 patients were included in this study, and were assigned into intervention group ($n = 46$) and control group ($n = 46$). Eventually, data of 89 patients were collected since one patient in the intervention group was lost during follow-up due to a change in contact number, and two patients in the control group refused to continue participating in the study. Therefore, 45 patients were left in the intervention group and 44 patients in the control group. No statistically significant difference in general information between the two groups was observed ($P > 0.05$), as shown in table 1.

Comparison of SAS, SDS, and Positive and Negative Affect Scores between the two groups before and after Intervention

The findings indicated that there were no statistically significant between-group difference prior to the intervention in terms of SAS, SDS as well as PANAS scores ($P > 0.05$). After implementation of the narrative nursing program, a marked reduction was observed in scores of SAS, SDS as well as negative affect of PANAS among the participants in the intervention group compared to the control group, conversely, the positive affect score was notably elevated in the intervention group, which showed statistically significant differences ($P < 0.05$). All the detailed data are presented in table 2.

Comparison of Satisfaction and Caring Scores between Two Groups after Intervention

The results demonstrated that the intervention group exhibited significantly higher scores in satisfaction and caring behaviors compared to the control group, indicating a statistically significant difference ($P < 0.05$). The detailed data are presented in table 3.

Comparison of SAS, SDS, and Positive and Negative Affect Scores between Two Groups at Pre-discharge, 1- and 3-month Post-discharge

Repeated measures analysis of variance revealed statistically significant differences in time effect, between-group effect, and interaction effect in terms of SAS score as well as Positive and Negative Affect scores in the two groups at pre-discharge, 1- and 3-month post-discharge ($P < 0.05$). The detailed data are summarized in table 4.

Comparison of SF-36 Scores at 1- and 3-month post-discharge between two groups

Repeated measures analysis of variance demonstrated statistically significant differences in the time effect and between-group effect for SF-36 scores between the two groups ($P < 0.05$). The SF-36 score at 3-month post-intervention was significantly higher than that at 1-month ($P < 0.05$), as shown in Table 5.

DISCUSSION

With the improvement of living standards and the enrichment of dietary culture, the incidence of AP has been increasing year by year, making it a common clinical acute abdominal disease[11]. The occurrence and development of AP are characterized by multiple complications, dangerous condition, and poor prognosis, which may directly endanger the patient's life[12]. Although routine clinical psychological nursing can achieve intervention effects in a certain degree, it is difficult to meet the pursuit of high quality of nursing service in modern society. In fact, there is a significant discrepancy between the subjective feelings of patients and the judgment of medical staff. The findings of an international prospective cohort study performed by foreign researchers using Patient-Reported Outcome scale to investigate patients with AP showed that it

was astonishing that patients exhibited unexpectedly high levels of concern regarding certain issues, among which abdominal pain ranked the first, followed by fatigue, and thirst occupied the third position, whereas fatigue and thirst respectively ranked the 24th and 7th in the view of medical staff[13]. These experiences are precisely the trigger for patients' negative emotions, and their subjective perceptions need to be arise attention of clinical practitioners. The narrative care, a program that advocates for the understanding and preservation of the individual's uniqueness and significance and encourages patients to express and release their negative emotions, represents a respectful and humanistic research practice. This approach can better uncover the emotions and experiences of patients that are more susceptible to be overlooked[14, 15]. From narrative assessment followed by targeted interventions in the first-stage, eliciting and analyzing stories in the second stage to re-intervention and evaluation in the third stage, the method is purposeful and well-planned, aiming to identify the characteristics of each issue and unique directions for resolution. In the process of intervention, it helps patients to re-understand their illness, alleviate suffering, and enhance their confidence[16].

After patients are admitted to the hospital, healthcare professionals need to process a substantial amount of disease-related information and data within limited time before implementation of treatment and care of patients. Thus, scarce time is available for analytical thinking, understanding, and listening to patients. As a matter of fact, nurses predominantly deal with symptoms, medical orders, tubes, and machinery operations and rarely focus on their emotional demands, whereas patients are eager to narrate their psychological and social distress while receiving treatment. The "Healthy China 2030" blueprint explicitly states the necessity to "strengthen humanistic care in medical services and build harmonious doctor-patient relationships." It sets higher demands for nurses to increasingly focus on the feelings and experiences of patients, and for healthcare professionals to promptly identify patients' psychological needs and provide emotional support and comfort[17]. In this study, patients in the intervention group exhibited significantly higher satisfaction scores and Caring Behavior Scale scores

compared to the control group ($P < 0.05$). Li Shuang *et al.*[18] also confirmed that narrative nursing interventions significantly contribute to increased satisfaction and improved nurse-patient relationships. In the narrative care program received by the patients in the intervention group, the intervention purpose was first informed through researchers and nurses, assessing emotions, soothing uneasiness, and building trust. Promote patient engagement through tangible treatment, listening and understanding the cultural context. Secondly, by asking and solving the patient's mood, diet and other problems, the narrative elements in the story are deconstructed, and the empathic discourse response is adopted. Mining facilitative or hindering factors in disease narratives to help patients transition to positive emotions. Finally, the researchers encourage the patients to complete the narratives, naming the questions, and externalizing the questions. Explore exceptional events to help patients form a positive self-identity and continue into the future. In this process, the nurse to listen to the patient's story, find nursing points, help patients to realize the reconstruction of life and disease story, correct cognitive errors, effectively make up for communication deviation, provide emotional support, not only can improve patient satisfaction and trust, promote patients' self-awareness and emotion management, optimize medical decision-making and personalized care, also can enhance the medical staff humanistic care ability, promote interdisciplinary cooperation and resource integration. Therefore, the narrative care model should be actively promoted and applied to bring benefits to more patients.

Patients with AP frequently experience a sense of defeat when they struggle with the disease in their daily activities and work. The necessity to modify their existing lifestyle and dietary habits further exacerbates feelings of anxiety and depression, which can adversely affect their quality of life[19,20]. The study of Phillips A. E *et al.*[21] confirmed that during hospitalization, 25% of AP patients are accompanied by anxiety or depression, and post-discharge dietary restrictions significantly interfere with their daily life, which weakens patients' confidence in resuming their normal lives. Boije *et al.*[22] summarized the specific manifestations of negative emotions in patients with AP:

When some patients are unable to cope with their negative emotions, they feel stressful, being in absence of energy to engage in any activities; others experience concerns and confusion with respect to proper diet in social settings; some fear a recurrence or deterioration of their condition, making them lacking confidence in resuming their daily lives.

In this study, repeated measures analysis showed that the time effect and the intervention method had significant influence on changes of SF-36 scores ($P < 0.05$). However, no significant interaction effect between time and intervention method was found ($P > 0.05$), indicating that the trend of changes in quality of life over time among AP patients showed no variations when the intervention methods change. The findings of a study suggest that negative emotions such as anxiety and depression have no sustained impact in AP patients if they receive proper treatment and care. Moreover, they are likely to experiencing improved quality of life especially when there are no further restrictions in their daily life and work after discharge[19]. A study[23] showed that the mental health scores of patients with AP in terms of quality of life were similar to those without. However, the quality of life among AP patients significantly decreases within at least one year after onset, primarily manifesting in physical and vitality aspects[24]. One possible reason for these differences could be the lack of a standardized tool for assessing the quality of life in AP patients. In our study, patients with AP in the intervention group demonstrated a significant improvement in their quality of life compared to the control group, which attributes to several factors: Firstly, patients definitely experience natural self-recovery after discharge, with a reduction in physical discomfort and an expected improvement in quality of life; secondly, narrative nursing is conducive to improve patients' negative emotions and alter unhealthy habits by its guidance in lifestyle modification, the reconstruction of negative events, and the redirection of positive experiences, thereby achieving the goal of enhancement of their overall quality of life.

In building on following standard care practices, we are committed to providing a seamless care experience for patients. First, to clarify the core value of narrative care –

– listen to the story of patients, understand their emotional experience, and use it as an important reference for nursing decisions. This process not only enhances the trust and communication between nurses and patients, but also promotes patients to better participate in self-care and improve the overall care effect. In order to achieve this goal, this study starts from the following aspects: (1) Narrative training and education: A comprehensive and systematic narrative nursing training for nursing teams, so that they can deeply understand the significance, principles and implementation methods of narrative nursing. Through case analysis, role playing and other interactive methods, the empathy and communication skills of nursing staff can be enhanced to ensure that every nurse can master the core skills of narrative nursing.(2) Integrated care plan: Narrative care is an integral part of developing a care plan for patients with acute pancreatitis. By collecting information about patients' personal experiences, disease feelings, and family support, patients' "narrative files" were constructed. Based on this information, the standard care plan is adjusted and improved to make it closer to the actual needs of patients.(3) Establish a narrative communication mechanism: Encourage nursing staff to take the initiative to establish narrative communication with patients in their daily work, to provide a safe and non-judgment environment for patients, so that they can freely express their inner fears, worries, hopes and other emotions. At the same time, nursing staff need to maintain a high degree of focus and listening, timely give emotional support and encouragement.(4) Team cooperation: Strengthen the communication and collaboration between interdisciplinary teams to ensure the smooth transmission of narrative nursing information between medical treatment, nursing, psychology and other fields. Through regular case discussion meetings, multidisciplinary consultation, and other forms, to jointly discuss the personalized nursing plan of patients, to realize the optimal allocation of nursing resources.(5) Evaluation and feedback: Establish an evaluation system of narrative nursing effect, regularly collect feedback from patients, family members and nursing staff, and conduct a comprehensive evaluation of the implementation effect of narrative nursing. According to the evaluation results, the nursing strategy is adjusted in time,

and the narrative nursing process is optimized to ensure the continuous, effective and humanized nursing services for patients.(6) Continuous improvement and innovation: Encourage nursing staff to actively participate in the research and practice of narrative nursing, and constantly explore new methods and techniques of narrative nursing. At the same time, we should pay attention to the new trends and trends in the nursing field at home and abroad, introduce advanced nursing concepts and technologies into the nursing practice of patients with acute pancreatitis, and promote the deep integration and innovative development of narrative nursing and standard nursing practice.

Narrative nursing has a profound impact in the field of individual care and healthcare policy. Policy makers focus on non-technical factors, such as communication barriers, and consider policy support. At the policy level, narrative nursing may promote the introduction of policies to listen to patients 'voices and respect patients' subjectivity, such as the establishment of patient narrative collection mechanism, adding narrative medical courses, encouraging narrative nursing practice research and other[25]. At the same time, narrative nursing has a profound impact on medical training, which requires narrative skills and empathy skills to be included in the compulsory courses to improve the quality of medical staff, promote doctor-patient communication, and build a harmonious relationship[26]. Narrative nursing also inspires the profession of medical professionals

CONCLUSION

In clinical practice, the implementation of narrative nursing programs for patients with AP exerts positive effects in improving negative emotions, significantly enhancing their experience during hospitalization, and altering negative perception for clinical nursing work. As a novel approach integrating humanistic and psychological nursing, narrative nursing is emerging as an essential skill that nurses are responsible to master. However, the current study is limited by a relatively small sample in size, so it is necessary for further clinical validation through an expanded cohort.

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SIMILARITY INDEX

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