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ORIGINAL RESEARCH

Effect of ABC Theory Model on Negative Emotion of Young Patients with Breast Cancer During Treatment

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Objective: To evaluate the effect of emotional ABC theory on anxiety and depression in young patients with breast cancer.

Methods: A total of 200 eligible young patients with breast cancer were randomly divided into control group (N = 100) and experimental group (N = 100). The control group received routine treatment, while the experimental group received emotional ABC theory intervention at the same time.

Results: The Self Rating Anxiety Scale (SAS) and Self Rating Depression Scale (SDS) scores of the two groups were observed before and after nursing. There was no significant difference between the two groups before nursing ($P > 0.05$), but there was significant difference between the two groups after nursing, the control group was significantly higher than the experimental group ($P < 0.05$). The satisfaction degree of the control group was significantly lower than that of the experimental group ($P < 0.05$).

Conclusion: Young patients with breast cancer using emotional ABC theory can effectively improve negative emotions, clinical can promote the nursing program.

Keywords: ABC theory model, young breast cancer, anxiety, depression, intervention study

Introduction

Breast cancer is one of the most common malignant tumors that threaten women's health, and with the socioeconomic development and increasing life pressure, breast cancer patients tend to be younger.[1–3] Breast cancer in young women is characterized by late stage, high histological grade, high invasiveness, lymphatic vessel emboli, and bone marrow metastasis, compared with Western countries, its mortality and morbidity are increasing year by year.[4–6] Young women with breast cancer face more psychological problems, such as anxiety about a higher risk of recurrence, stress about marriage, childbirth, and work, negative emotions such as anxiety and depression often occur in different degrees during treatment, which lead to the decline of quality of life, immune function, poor treatment compliance, and aggravate the adverse reactions of treatment, etc., therefore, it is of great significance to pay attention to the research of negative emotion psychological intervention in young patients with breast cancer.[7–9] In addition, the diagnosis and treatment of breast cancer expose patients to both physical and psychological trauma. On a physical level, breast cancer survivors must deal with the long-term side effects of cancer treatment. On a psychological level, changes in diagnosis, lifestyle, body shape and social relationships often increase negative emotions such as emotional distress, depression and anxiety. Good psychological intervention can help breast cancer patients have better treatment results.[10] The study found that emotion-related abilities play an important role in the quality of life of breast cancer survivors.[11,12] However, not all social support is beneficial for breast cancer patients.[13,14] Therefore, we need more scientific methods to intervene in the psychological activities of breast cancer patients.

In recent years, emotional counseling and treatment for cancer patients can alleviate the anxiety of cancer patients, benefit the physical recovery of cancer patients, and improve the quality of life of cancer patients.[15,16] The emotional ABC theory is

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a method of targeted psychotherapy for the psychological problems existing in the negative emotional groups.[17] Its unique advantage lies in examining the irrational beliefs that are hidden behind the negative emotions of young breast cancer patients, and debating the irrational beliefs that exist in breast cancer patients, to help them establish rational beliefs and rational thinking, get positive emotions and behavior. The theory of emotional ABC is regarded as the developing direction of psychotherapy for cancer patients because of its high efficiency, easy implementation and great influence.[18] Therefore, we hypothesized that ABC theory model has a positive effect on relieving negative emotion of young patients with breast cancer during treatment. The purpose of this study was to evaluate the effect of ABC theory on young patients with breast cancer. The results of this study have guiding significance for the clinical nursing of breast cancer patients.

Materials and Methods

General Information

A total of 200 young breast cancer patients in the treatment stage were selected as the study objects, all of whom were hospitalized in the Affiliated Hospital of Hebei University of Technology. Methods: 200 young patients with breast cancer[19,20] were randomly divided into control group (N = 100) and experimental group (N = 100). The study was approved by the Ethics Committee of Affiliated Hospital of Hebei Engineering University. All patients were informed of the study and signed the informed consent form. The Age of the control group was 25–45 years old with an average of 35.6 years old, while the experimental group was 25–45 years old with an average of 35.7 years old. There was no significant difference between the two groups ($P > 0.05$).

Inclusive criteria: (1) female patients aged 25–45 years; (2) primary breast cancer; (3) patients undergoing surgery, chemotherapy or targeted therapy after diagnosis of pathology; (4) no other types of tumors or mental diseases; (5) patients voluntarily participate in the investigation with informed consent. Exclusion Criteria: (1) female patients older than 45 years; (2) serious diseases of the body and other organs; (3) have a history of mental illness and communication disorders; (4) complicated with other types of tumors; (5) those who quit midway.

Methods

The routine rehabilitation therapy was used in the control group, and health education was strengthened to make the patients cooperate actively. On this basis, the experimental group applied emotional ABC theory, including: (1) to set up a professional team of ABC theory, including head nurses, head nurses and responsibility nurses. Mainly for the young breast cancer patients to carry on ABC theory accumulation intervention, the head nurse must understand the reason of the patient's bad mood, at the same time helps the nursing staff master the psychological nursing skills, provides the service and so on consultation for the patient, make the patient face the treatment of the disease positively. Team members should be assessed and trained before nursing. (2) ABC theory intervention content: ABC is divided into three parts. A as a precipitating event, that is, members of the care team discuss the causes of negative emotions in young breast cancer patients. B is a kind of view and belief produced by the individual's own cognitive ability and knowledge level after the occurrence of the induced event. Team members through a professional way to enable patients to express the feelings of the heart, and to help patients use the right way to vent the bad feelings of the heart. C is the result of an individual's emotions under certain conditions, that is, the emotions and the behaviors and reactions reflected in them. (3) Mode of implementation:

ABC theory team to implement ABC theory intervention, once a day, two hours a day for a week, in the course of the intervention, through a number of ways to improve the results, including strengthening communication, feedback and so on. The person in charge must document the process of the intervention and raise some issues in the group meeting the next morning, with the group discussing and developing solutions.

Observation Indicators

The Self Rating Anxiety Scale (SAS) and Self rating Depression Scale (SDS) scores of the two groups were observed before and after nursing. The SAS is a commonly used psychological assessment tool that is used to evaluate an individual's level of anxiety symptoms. It consists of 20 questions that aim to measure an individual's level of anxiety in different situations,

including social interactions, general distress in life, fear, and anxiety, among other aspects. Each question has four options, and the individual needs to choose the answer that best describes their situation, with scores ranging from 0 (no anxiety) to 4 (very anxious) for each question. The total score ranges from 0–80 points, with higher scores indicating more prominent anxiety symptoms. The normal upper limit reference value of SAS scale standard score was 50 points, and 50–59 points was classified as mild anxiety; 60–69 for moderate anxiety; scores above 69 are considered as severe anxiety.

The SDS is a commonly used psychological assessment tool that is used to evaluate an individual's level of depression symptoms. It consists of 20 questions that cover various aspects of depression, such as mood, cognition, and behavior. Each question has four options, and the individual needs to choose the answer that best describes their situation, with scores ranging from 0 (no depression symptoms) to 4 (very prominent depression symptoms) for each question. The total score ranges from 0–80 points, with higher scores indicating more severe depression symptoms. The upper limit reference value of SDS standard score was 53 points, and 53 points to 62 points was mild depression, 63 to 72 for moderate depression; a score above 72 is considered major depression.

Through the questionnaire statistics of patient satisfaction, satisfaction is divided into: very satisfied, satisfied and dissatisfied.

Statistical Methods

SPSS 21.0 software was used to analyze the statistical results. The measurement data were expressed as ($\bar{x} \pm s$), *t*-test, count data as (%), and χ^2 test as $P < 0.05$. The Cronbach's alpha coefficient was used to evaluate the reliability of the questionnaires.

Results

Comparison of SAS and SDS Scores Between the Two Groups

The Cronbach's alpha coefficients of SAS and SDS were 0.950 and 0.906, respectively. The SAS and SDS scores of the two groups were observed before and after nursing. There was no significant difference between the two groups before nursing ($P > 0.05$), but there was significant difference between the two groups after nursing, the control group was significantly higher than the experimental group ($P < 0.05$). See Table 1.

Comparison of Nursing Satisfaction Between Two Groups

According to the investigation of patients' satisfaction in the control group and the experimental group, the nursing satisfaction in the control group was significantly lower than that in the experimental group ($P < 0.05$). See Table 2.

Table 1 Comparison of SAS and SDS Scores Between the Two Groups

Group	Case	SAS		SDS	
		Before Nursing Intervention	After Nursing Intervention	Before Nursing Intervention	After Nursing Intervention
Control Group	100	50.23±3.29	40.30±3.23	52.65±2.36	41.36±1.78
Experimental group	100	50.13±3.23	30.16±3.42	52.61±2.27	30.27±1.26
t	–	0.373	4.963	0.512	5.226
P	–	0.092	0.000	0.092	0.000

Table 2 Comparison of Nursing Satisfaction Between Two Groups (n/%)

Group	Case	Very Satisfied	Satisfied	Not Satisfied	Satisfaction
Control Group	100	35 (35.00)	50 (50.00)	15 (15.00)	85 (85.00)
Experimental group	100	40 (40.00)	54 (54.00)	5 (5.00)	95 (95.00)
χ^2		4.324	4.292	5.294	6.392
P		0.000	0.000	0.000	0.000

Discussion

ABC emotion theory is divided into A, B and C three aspects, respectively is induced behavior, emotional consequences and cognitive beliefs. ABC emotion theory holds that the event itself is not directly related to the bad emotion, but is caused by an individual's wrong view of things, and there is a psychological stress reaction to an event. Therefore, it can also lead to patients with adverse emotions, such as anxiety, depression, if not timely intervention, may lead to a loss of psychological balance, resulting in great changes in the treatment of things, such as the face of treatment more passive.[21] Therefore, more attention should be paid to the exclusion of patients with adverse emotions. Durosini et al[11] clearly demonstrated that emotional competence plays an important role in the quality of life and health management of breast cancer survivors. Besides, Savioni et al[22] found that psychological interventions can improve the quality of life, well-being and health of cancer patients. Breast cancer is a common disease in women, especially for young patients with breast cancer, it is difficult to avoid some negative emotions during treatment, resulting in decreased treatment compliance. The application of ABC theory can make patients know the relationship among ABC, evaluate their own disease and behavior correctly, and face the bad influence objectively, to abandon the irrational concept and actively cooperate with clinical treatment can greatly improve the correct quality of life of patients. Self-efficacy refers to the patient's attitude, way of thinking and behavior choice in the face of adversity. Studies have found that the more optimistic patients are in the face of adversity, the better the treatment effect.[23]

In recent years, in the treatment of patients with cancer, emotional care for patients with cancer contributes to emotional stability and helps patients improve their quality of life.[24] Studies have shown that improving self-efficacy in cancer patients helps to reduce anxiety in cancer patients while reducing the expression of negative emotions in cancer patients.[25,26] Research by Nordin et al[27] has shown that reducing anxiety and increasing emotional well-being in patients with gastrointestinal cancer are beneficial to patients' physical health. Fann et al[28] have reported that breast cancer patients with major depression can lead to magnification of physical symptoms, increased dysfunction, and poor treatment adherence. Therefore, the improvement of cancer patients' bad mood is beneficial to the emotional stability of patients and the treatment of the disease.

The results showed that there was no significant difference in SAS and SDS scores between the two groups before and after nursing, but there was significant difference between the two groups after nursing, the control group was significantly higher than the experimental group.The satisfaction degree of the control group was significantly lower than that of the experimental group. This shows that the ABC theory for young patients with breast cancer during the treatment period can make the patients' bad mood get better. This is mainly due to the ABC theory between the Doctor and patient closer, and can let the nurses stand in the patient's perspective to put themselves in others' shoes, and promote the initiative of Nursing Services, the patients' attitude to nursing has also changed, thus improving the quality of life and nursing satisfaction. The results of this study have guiding significance for the clinical nursing of breast cancer patients. The results of this paper confirm that in the process of diagnosis and treatment of breast cancer patients, psychological intervention through ABC model and other methods is necessary and needs to be popularized in clinical work. There are still some limitations in this study. First, the sample size of patients is small, and we will collect more sample cases to further confirm the conclusion of this study. Secondly, we will further improve the ABC theory to improve the mood of breast cancer patients. In addition, the observation time of the patients in this study was short, so we should continue to follow up in the following studies to observe the long-term effect of ABC model intervention.

Conclusion

Young breast cancer patients with emotional ABC theory can be used to effectively improve negative emotions, clinical can promote the nursing program.

Data Sharing Statement

All data generated or analysed during this study are included in this article. Further enquiries can be directed to the corresponding author.

Ethics Approval and Consent to Participate

This study was conducted in accordance with the Declaration of Helsinki and approved by the ethics committee of Affiliated Hospital of Hebei Engineering University. Written informed consent was obtained from all participants.

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Disclosure

All of the authors had no any personal, financial, commercial, or academic conflicts of interest separately.

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