Effect of Nursing Measures Based on Self-Efficacy Theory on State Self-Esteem of Breast Cancer Patients

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To analyze the effect of nursing measures based on self-efficacy theory on the state self-esteem of breast cancer patients. 110 breast cancer patients who were treated in our hospital from October 2018 to October 2019 were randomly divided into control group and observation group. The control group was given routine nursing measures, and the observation group was given nursing measures under the guidance of self-efficacy theory. Before operation, 1 week after operation and 3 months after operation, the general data of the two groups before and after treatment were recorded. The self-efficacy level and self-esteem level of the patients before and after treatment were assessed by the self-efficacy scale (GSEs) and state self-esteem scale (SSEs). The compliance of functional exercise and shoulder joint activity (ROM) of the two groups were compared, and the physical status of the two groups were analyzed. To analyze the effect of nursing measures based on self-efficacy theory on the state self-esteem of breast cancer patients. The GSEs score of the two groups increased with the time, and there was no significant difference between the two groups before operation ($P > 0.05$). After 1 week and 3 months, the GSEs score of the observation group was significantly higher than that of the control group ($P < 0.05$). The compliance evaluation table of functional exercise in the two groups increased with the time, and the compliance evaluation table of functional exercise in the observation group was significantly higher than that in the control group, the difference was statistically significant ($P < 0.05$). ROM of the two groups increased with time, and ROM of the observation group was significantly better than that of the control group, the difference was statistically significant ($P < 0.05$). The self-esteem level of the two groups increased with time, and the self-esteem level of the observation group was significantly higher than that of the control group, the difference was statistically significant ($P < 0.05$). The nursing measures under the guidance of self-efficacy theory can help patients to complete functional exercise, improve their quality of life, improve their self-esteem level, and can be widely used in clinical practice.

Keywords: Self-Efficacy Theory, Nursing, Measures, Adenocarcinoma, Patient Status, Self-esteem Level, Impact
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Breast cancer is a malignant tumor caused by malignant growth and hyperplasia of mammary epithelial tissue stimulated by harmful substances. Clinically, symptoms such as breast mass, axillary lymph node swelling, skin changes, nipple discharge, nipple and areola abnormalities can occur [1]. Epidemiological data in recent years show that the incidence of breast cancer is increasing year by year, with an annual growth rate of 5%-20%, which is one of the main causes of female death [2]. At present, surgery is mainly used to treat breast cancer, but because of the condition and postoperative pain and other factors, breast cancer patients are reluctant to carry out corresponding functional exercises, poor compliance, surgical injury of the blood circulation and lymphatic circulation of the side limbs of

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patients, breast cancer is one of the most common tumors in women, Surgery mostly requires breast resection, destroys the second sexual characteristics of women, injures the external image and self-esteem level of patients, affects the diagnosis and treatment effect of patients, quality of life, and can seriously endanger life [3]. Therefore, it is particularly important to improve patients' compliance behavior and guide patients to carry out functional exercise as soon as possible. Foreign studies have pointed out that self-efficacy level is an important factor affecting the compliance of breast cancer patients with functional exercise after surgery [3]. Self-efficacy theory refers to an individual's belief in the ability to accomplish a certain behavioral goal or cope with a certain difficult situation [4]. Self-efficacy theory is to improve patients' mentality and behavior by changing their health education, cognitive intervention, social support and experience acquisition [4-5]. Recent studies have shown that nursing measures guided by self-efficacy theory have a certain effect on the body status and self-esteem level of breast cancer patients after surgery [5-6]. This experiment aims to analyze the effect of nursing measures based on self-efficacy theory on state self-esteem level of breast cancer patients.

DATA AND METHODS

General Information

110 breast cancer patients who were treated in breast surgery of our hospital from October 2018 to October 2019 were collected, and the inclusion criteria were as follows: 1) breast cancer was confirmed by clean-up examination, and all patients received modified radical mastectomy and breast conserving surgery; 2) all patients were not treated with surgery, chemotherapy and radiotherapy before admission; 3) patients had normal consciousness and no cognitive dysfunction; 4) no systemic metastasis occurred. 5) Effective communication, through the help of medical staff or self-completed questionnaires; The age of patients is over 18 years old; All patients and their families know and sign informed consent. Exclusion criteria: 1) patients with other malignant tumors; 2) patients with mental illness or cognitive impairment; 3) patients with severe infection or other serious chronic diseases; 4) patients who do not understand their own conditions; 5) patients with severe complications after surgery; and 5) patients who refuse the experiment or terminate the experiment for other reasons. They were randomly divided into control group and observation group. There were 55 cases in the control group, all of them were female, with an average age of (45.06± 9.78) years and an average BMI value of (20.05±0.98) Kg/m2. There were 55 cases in the observation group, all of them were female, with an average age of (45.15±9.45) years and an average BMI value of (20.08±1.02) Kg/m2.There were no significant differences in age, gender and BMI between the groups ($P > 0.05$).

Methods

Control group: routine nursing measures were given. On the first day of admission, the responsible nurses provide the patients with admission health education, introduction of ward environment, dietary precautions, etc. On the day of operation or the first day, the responsible nurses inform the patients and their families of preoperative precautions, preoperative preparation, etc. After the operation, the responsible nurses provide health education to the patients and their families from time to time. It mainly deals with the necessity of functional exercise, dietary precautions, application of drainage tube, standardization of quality of life, self-monitoring and use of instruments, etc. When discharged from hospital, inform patients and their families of postoperative precautions and remind patients to review regularly.

Observation group: The intervention was based on self-efficacy theory while routine nursing measures were given. It is mainly guided by direct experience, indirect experience, language persuasion, physiology and emotion. (1) Directness experience: work with patients to formulate goals, break down the overall goals into multiple small goals, test according to the goals, and feedback and evaluate the achievement of the goals of patients, so as to promote the realization of the goals of patients. Instruct patients to write their own functional exercises, help patients massage various joints of limbs, and guide patients to train step by step.(2) Indirect experience: often discuss with patients about the problems and difficulties of rehabilitation training, understand the implementation of the patient's disease management plan, guide and demonstrate the specific steps of functional exercise, invite patients returned from surgery to present their lectures, and improve patients' confidence in war diseases.(3) Language persuasion: organize patient exchange meetings to exchange the experience of

healthy exercise. Actively communicate with patients, encourage patients and build confidence.PPT health lecture was conducted, mainly on the importance of postoperative health exercise, methods of postoperative functional exercise, follow-up treatment of breast cancer, prognosis and treatment of upper limb swelling on the affected side, postoperative dietary precautions and follow-up, etc. (4) Physiology and emotion: establish Wechat communication group and send relevant lecture knowledge. Teach self-relaxation techniques such as deep breathing and muscle relaxation. Listen carefully to the patients' inner thoughts and give them psychological support. Carry out health education to the patients' family members so that they can better care for and care for their family members, and increase their confidence to overcome the disease.

Observation Index

General data before and after surgery, 1 week after surgery and 3 months after surgery were recorded, and self-efficacy scale (GSES) and state self-esteem scale (SSES) were used to evaluate the level of self-efficacy and self-esteem before and after treatment. The compliance of functional exercise and shoulder mobility (ROM) were compared between the two groups, and the physical status of the two groups was analyzed.

GSES: Evaluable patient self-efficacy level. There are 10 items in this scale, each item has 1-4 points, namely "completely incorrect", "somewhat correct", "mostly correct" and "completely correct". The total score is 10-40 points. Patients were selected according to the actual situation, in which the higher the score, the stronger the self-efficacy and the stronger the self-confidence of the patients.

Functional Exercise Compliance: This scale consists of 3 dimensions and 18 items, among which there are 9 items of physical exercise compliance, 5 items of post-operative attention compliance, and 4 items of actively seeking advice compliance. Each entry has a score of 1-4, i.e.'can't do at all','can't do at all','can do basically', and' can do completely'. The total score ranged from 18 to 72, with higher scores indicating higher compliance with functional exercise.

ROM: no symptoms under normal conditions; shoulder flexion 0-180 degrees, extension 0-50 degrees, abduction 0-180 degrees, internal and external rotation 0-90 degrees in patients with mild dysfunction; shoulder flexion 0-160 degrees, extension 0-40 degrees, abduction 0-160 degrees, internal and external rotation 0-60 degrees in patients with moderate dysfunction; Patients with severe dysfunction have shoulder flexion 0-140 degrees, extension 0-30 degrees, abduction 0-140 degrees, internal and external rotation 0-30 degrees.

SSES: This scale includes 3 dimensions and 20 items. There were 7 items of behavioral self-esteem, 7 items of social self-esteem and 6 items of external self-esteem. Each item includes "very dissatisfied", "disagree", "agree" and "strongly agree", with a total score of 20-80. The higher the score, the higher the level of self-esteem.

Statistical Methods

The data of this study were analyzed by SPSS20.0 software package for statistical data. All measurement data were compared using ($x\pm s$), and t-test was used for comparison between groups. Count data were expressed by percentages, and χ^2 test was used for comparison between groups. Rank data were compared using Ridit test. The statistical results were statistically significant with $P < 0.05$.

RESULT

Comparison of GSES Score before and after Operation between Two Groups

The GSES score of the two groups of patients showed an upward trend with the extension of time. There was no significant difference in the GSES score between the two groups before operation ($P > 0.05$), and the GSES score of the observation group was significantly higher than that of the control group after 1 week and 3 months after operation ($P < 0.05$). See Table 1.

Table 1.
Comparison of GSES scores before and after surgery in two groups($\bar{x}\pm s$)

Group	Cases	GSES score		
		Preoperative	1 week after operation	3 months after operation
Observation group	55	12.36±2.45	21.48±3.05	38.46±2.15
Control group	55	12.55±2.51	16.58±2.68	25.46±3.48
t		0.422	8.950	23.568
P		0.673	<0.001	<0.001

Comparisons of Postoperative Functional Exercise Compliance between Two Groups of Patients

The functional exercise compliance evaluation table of the two groups of patients showed an

upward trend over time, and the functional exercise compliance evaluation of the patients in the observation group showed that it was significantly higher than that of the control group, the difference was statistically significant (P < 0.05). See Table 2.

Comparison of ROM after Nursing between Two Groups

The ROM status of the two groups of patients showed an increasing trend with time, and the ROM status of the patients in the observation group was significantly better than that of the control group, the difference was statistically significant (P < 0.05). See Table 3.

Comparison of Self-Esteem Level between Two Groups before and after Treatment

The level of self-esteem in the two groups increased with time, and the level of self-esteem in the observation group was significantly higher than that in the control group, the difference was statistically significant (P < 0.05). See Table 4.

Table 2.
Comparison of postoperative functional exercise compliance between two groups($\bar{x}\pm s$)

Group	cases	Functional Exercise Compliance Evaluation Form	
		1 week after operation	3 months after operation
Observation group	55	54.26±5.16	68.43±6.48
Control group	55	40.52±5.32	50.16±5.48
t		13.749	15.965
P		<0.001	<0.001

Table 3.
Comparison of ROM after nursing between two groups($\bar{x}\pm s$)

	Group	Cases	forward flexion	Shoulder extension	shoulder abduction	Internal rotation of shoulder	Shoulder external rotation
1 week after operation	Observation group	55	71.26±7.26	31.48±2.15	75.46±4.56	29.46±2.58	29.65±2.36
	Control group	55	63.15±7.05	26.85±3.15	66.48±3.17	23.16±2.15	24.21±2.38
	t		5.943	9.003	11.991	13.912	12.036
	P		<0.001	<0.001	<0.001	<0.001	<0.001
3 months after operation	Observation group	55	176.48±10.52	58.69±6.34	174.35±10.28	67.95±4.25	68.42±5.31
	Control group	55	143.86±5.49	45.26±5.28	143.85±0.53	50.38±4.15	52.16±4.67
	t		20.386	12.071	21.974	16.004	17.052
	P		<0.001	<0.001	<0.001	<0.001	<0.001

Table 4.
Comparison of SSES level between two groups before and after treatment($\bar{x}\pm s$)

	Group	Cases	Behavioral self-esteem	Social self-esteem	Appearance self-esteem	Total score of self-esteem
1 week after operation	Observation group	55	15.43±2.16	14.17±2.45	10.73±3.06	40.33±4.16
	Control group	55	20.16±3.46	18.26±2.47	13.48±2.48	51.90±2.15
	t		8.600	8.718	5.177	18.323
	P		<0.001	<0.001	<0.001	<0.001
3 months after operation	Observation group	55	18.43±2.13	17.79±3.16	14.23±2.16	50.45±3.25
	Control group	55	23.17±3.15	27.13±2.76	22.46±2.73	72.76±3.48
	t		9.244	16.509	17.533	34.747
	P		<0.001	<0.001	<0.001	<0.001

DISCUSSION

Breast cancer is one of the major tumors seriously affecting women's health, and its incidence is increasing year by year in recent years. The treatment of breast cancer is mainly radical mastectomy, although it can resect the tumor tissue and prolong the life of patients, but due to the occurrence of postoperative cancer-related fatigue and postoperative upper limb lymphedema and other complications, it seriously affects the self-efficacy of patients, as well as the social support after surgery. The level of efficacy can indicate the recovery of their own state, can directly reflect the patient's initiative, and for patients, its significance lies in its ability to explain the intervention effect of continuing postoperative care on the patient's active will; The level of support can explain the support from family or social aspects, and evaluate the impact of the objective environment around the patients on their recovery. Continuous care emphasizes a hospital-to-family nursing intervention model. At present, the self-efficacy theory provides a new idea for the

treatment of breast cancer after surgery. Self-efficacy is a core concept put forward by American psychologists in social learning theory, which refers to a person's ability to engage in certain behaviors and achieve expected results in a specific situation. To a large extent, it refers to the individual's own feelings of self-related abilities, but also refers to people's confidence or belief in their ability to achieve specific domain behavioral goals. Simply speaking, it refers to the individual's belief that they can achieve success, that is,'I can do', reflecting the human body's level of exertion of their potential [6-7]. Self-efficacy determines the effort people make in an activity, the resilience when they encounter obstacles and the resilience when they suffer setbacks. It is also influenced by other people's successful experience, encouragement and persuasion [7]. The self-nursing intervention program mainly affects the self-efficacy level of breast cancer patients through four information sources, involving a wide range of information sources. The self-efficacy level of patients can be comprehensively improved by means of behavior shaping, written expression, attribution training, visual feedback, model demonstration, group communication, Wechat group communication, cognitive intervention, health lectures, relaxation therapy, psychological counseling, social support, etc. [8]. Individuals mainly obtain self-efficacy from four aspects: personal experience, alternative experience, verbal persuasion, physiology and emotion. Self-efficacy pays attention to the control effect of human subjective consciousness on behavior, and emphasizes the regulation of human potential to achieve the corresponding purpose [8-9]. Nursing interventions in hospitals can meet patients' requirements for improving self-efficacy and social support, but some studies have pointed out that breast cancer patients' post-operative self-efficacy and social support are significantly lower than other populations. In this study, the experiment made a deep understanding and accurate grasp of the self-efficacy theory, combined with the actual problems of experimental patients, and formulated targeted nursing measures. That is, incentive, social support, behavioral contract, alternative experience and negative stimulus avoidance are carried out to help patients correctly understand the disease and properly evaluate themselves, and guide patients to accept and actively participate in treatment and nursing. It is found that the GSES scores of the two groups of patients are on the rise with the extension of time. There was no significant difference in GSES score between the two groups before operation ($P > 0.05$), and the GSES score of the observation group was significantly higher than that of the control group after 1 week and 3 months after operation ($P < 0.05$). It suggests that nursing measures guided by self-efficacy theory can improve patients' self-efficacy and help patients recover after surgery.

The development of functional exercise in breast cancer patients after surgery is directly related to the effect of surgical rehabilitation and prognosis. Studies have shown that functional exercise after surgery is an important link to promote functional recovery of affected limbs after breast cancer surgery, and it is a step-by-step, continuous process. However, breast cancer patients suffer from surgical trauma, psychological factors, the condition itself and other factors after surgery. Their self-efficacy is very poor and at a low level. Most of them do not believe or do not fully believe that functional training will have a positive impact on postoperative recovery. Therefore, they cannot actively participate in functional training, and their compliance with functional training is poor [10]. In response to the above problems, this experiment through a variety of health education, to improve the breast cancer patients' understanding of functional exercise, realize the importance of functional exercise for postoperative rehabilitation; Detailed functional exercise, from the day after surgery, to clarify the content of functional training patients need every day, functional exercise and relaxation therapy combined, patients with a high degree of acceptance, can also ensure the effect of functional exercise. Firstly, improve patients' enthusiasm for functional exercise with visual feedback: display functional exercise videos to patients three times a day during the process of functional exercise, so that patients can truly feel the feedback effect of functional exercise, which helps to improve patients' enthusiasm for functional exercise participation; secondly, fully mobilize all aspects of support forces: By establishing Wechat group, conducting group communication activities, conducting synchronous health education and psychological counseling for family members, allowing family members to participate in the development and supervision of functional exercise, and allowing patients to integrate into social activities, patients can feel the warmth of family and society, thereby enhancing the enthusiasm of functional exercise participation [11]. Postoperative

functional exercise for breast cancer patients is of great significance in surgical rehabilitation and prognosis [9-12]. Studies have shown that functional exercise after surgery is one of the important conditions to promote the recovery of affected limbs in breast cancer patients after surgery, and it is a continuous, stepped process. Due to the influence of psychological trauma, surgical trauma and condition after surgery, breast cancer patients have poor self-efficacy and functional exercise compliance and enthusiasm, which is not conducive to the recovery of patients and the improvement of quality of life [10-13]. Therefore, this experiment carries out a variety of education methods for patients in the observation group, emphasizes the importance of functional exercise, and improves the confidence of patients to overcome the disease. The results showed that the functional exercise compliance evaluation table of the two groups of patients showed an upward trend over time, and the functional exercise compliance evaluation of the patients in the observation group showed that it was significantly higher than that of the control group, the difference was statistically significant ($P < 0.05$).It suggests that nursing measures guided by self-efficacy theory can mobilize patients' compliance with functional exercise and improve the therapeutic effect.

The study found that the occurrence of complications such as limb edema and shoulder dyskinesia after breast cancer surgery was associated with axillary lymphatic vessel damage and large accumulation of lymph [14]. The improvement of shoulder function in patients undergoing breast cancer surgery depends on the professional nursing and guidance of nursing staff on the one hand, and on the other hand, it is more related to the level of functional exercise, in which postoperative functional exercise is the main factor affecting shoulder function of patients [15]. Other studies have pointed out that self-efficacy is the main factor affecting the compliance of functional exercise of breast cancer patients after surgery, and functional exercise compliance can directly affect the improvement of shoulder function of affected limbs. Therefore, self-efficacy is the main influencing factor of shoulder ROM in breast cancer patients after surgery [16]. Postoperative limb edema and shoulder dysfunction are common complications in breast cancer patients after surgery, which are mainly related to axillary lymphatic vessel damage and massive lymphatic stasis in patients after surgery [11]. Improving shoulder function is the main treatment direction for breast cancer patients after surgery [12-17]. Studies have shown that self-efficacy is one of the important elements affecting patients' compliance with functional exercise after surgery, and functional exercise compliance directly affects the quality and efficiency of patients' functional exercise. Therefore, self-efficacy is an important factor affecting patients' shoulder ROM after surgery [13-18]. In this study, the ROM of the two groups of patients showed an increasing trend over time, and the ROM of the observation group was significantly higher than that of the control group, the difference was statistically significant ($P < 0.05$). It suggests that nursing measures guided by self-efficacy theory can promote patients to perform functional exercises, which is beneficial to patients' recovery.

Breast cancer is more special than other tumors, patients not only need to bear the psychological pressure brought by the tumor itself, but also bear the physical intention barrier caused by the loss of breast, which has adverse effects on family and marriage, making patients have more serious psychological stress [14-19]. Self-esteem is an individual's positive emotional experience of self-obtained in social practice. It is the product of the interaction between subject and object and is composed of self-efficacy and self-love. State self-esteem is a state of self-esteem of an individual in a certain period of time. It is an individual's emotional evaluation of himself in a certain situation or state. It is volatile and unstable and susceptible to the influence of the situation at that time. Breast cancer is one of the most common tumors in women. Unlike other tumor operations, breast cancer surgery mostly requires breast resection, which causes the destruction of female secondary sexual characteristics and seriously affects the external image and self-esteem level of patients. The decrease of self-esteem level can lead to the decrease of hope level, and patients often cope with social roles and interpersonal interactions with excessive avoidance and yielding, thus affecting the diagnosis and treatment effect and quality of life of patients. Self-esteem can be divided into trait self-esteem and state self-esteem according to stability, among which state self-esteem is more susceptible to external environment interference [15]. In recent years, self-efficacy enhancement intervention studies conducted on oral cancer patients showed that self-efficacy intervention can improve the level of self-

esteem of patients, which is conducive to their rehabilitation and return to society [20]. A study on patients with stoma found that general self-efficacy was positively correlated with self-esteem [21]. In addition, body image disorder is a painful or impaired prejudice caused by visual defects in the imagination or slightly [22]. Postoperative breast cancer patients have obvious body image disorders, and self-efficacy intervention can reduce the level of body image disorders, which may be another mechanism for the improvement of state self-esteem of the subjects. In addition, increased levels of self-esteem may contribute to disease treatment, and recent studies have shown that self-esteem plays a mediating role in clinical treatment. In this study, the plasticity of state self-esteem was utilized, and self-efficacy was applied to increase nursing intervention to improve patients' self-esteem level. The results showed that the self-esteem level of patients in the two groups increased with time, and the self-esteem level of patients in the observation group was significantly higher than that of the control group, with a statistically significant difference ($P < 0.05$). It is suggested that nursing measures guided by self-efficacy theory are beneficial for patients to improve their self-esteem and help them to re-enter society.

CONCLUSION

In conclusion, nursing measures guided by self-efficacy theory can help patients complete functional exercise, improve their quality of life, and improve their self-esteem, which can be widely used in clinical practice.

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