International Journal of Biology and Life Sciences
ISSN: 2957-9511 | Vol. 7, No. 2, 2024

Expressive Writing Intervention Study on the Post-traumatic Growth in Breast Cancer Patients

-- A Qualitative Study to Explore the Intervening Mechanisms

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Abstract: To explore the mechanism of the effect of expressive writing on the post-traumatic growth of breast cancer patients, and to provide evidence for the rehabilitation of cancer patients. A qualitative interview study was done among 15 young convalescent breast cancer patients who participated in expressive writing intervention in a tertiary A hospital in Guangdong Province, The interview focused on the psychological experience of post-traumatic growth in the process of expressive writing, while content analysis focuses on the content of expressive writing. The interview materials were sorted and analyzed using the Colaizzi 7-step analysis method, and the themes were organized. Results showed that Five themes were extracted from the psychological experience of the post-traumatic growth, including the personality change, the relationship change, the life change, the meaning of illness, the gratitude and dedication. The text content of breast cancer patients' expressive writing includes five dimensions: fact description, emotional expression, self affirmation, cognitive reappraisal, and meaning discovery. There were obvious post-traumatic growth in convalescent young breast cancer patients, while experiencing the negative events and negative psychology of illness. The potential therapeutic mechanism of expressive writing in breast cancer survivors includes five factors: fact description, emotional expression, self affirmation, cognitive reappraisal, and meaning discovery.

Keywords: Breast Cancer; Expressive Writing; Psychological Experience; Post-traumatic Growth; Qualitative Research.

1. Introduction

Breast cancer is a common malignant tumor among young women. With the promotion of early screening for breast cancer and the improvement of breast cancer diagnosis and treatment techniques, the survival rate of breast cancer patients for more than 5 years has significantly increased, and it has become the norm for patients to enter the rehabilitation period after clinical treatment[1,2]. Post-traumatic growth is the positive change that occurs in an individual during the process of experiencing a traumatic event[3]. Post-traumatic growth can enable individuals to reconstruct cognitive patterns, improve emotional regulation ability, change their own views, enhance interpersonal relationships, and promote understanding in life philosophy[4-6]. Some scholars have found that after experiencing the loss of the breast and changes in body shape, breast cancer patients began to reflect positively on the disease and life, and post-traumatic growth occurred 6 months after the end of surgical treatment[7]. Expressive writing is a psychological intervention method that realizes emotional disclosure by writing about feelings and thoughts related to an important or traumatic event experienced by an individual, thereby regulating emotions and cognitive processes to promote health [8]. Relevant studies have shown that expressive writing can reduce anxiety and depression levels, relieve post-traumatic stress symptoms, and improve the quality of life[9-11]. What kind of expressive writing content is effective for cancer patients? This study aims to explore the potential healing mechanism of expressive writing of breast cancer survivors through the content analysis of the expressive writing texts of breast cancer patients.

2. Methods

2.1. Setting and Participants

The purposive sampling approach was employed to select 15 breast cancer patients who participated in the expressive writing activity in the oncology department of a tertiary grade A hospital in Guangdong Province from June 2023 to December 2023 as the research subjects. Inclusion criteria: (1) Female patients with breast cancer; (2) Aged 18-44 years; (3) Diagnosed with breast cancer through pathology, being in the rehabilitation period: more than six months after the onset and more than two months after the end of treatment, with a Karnofsky Performance Status score > 80 points; (4) Informed consent and cooperative throughout the research process. Meanwhile, the text materials of the expressive writing of the 15 breast cancer patients were subjected to content analysis. Exclusion criteria:(1) Patients with recurrence or metastasis; (2) Those with severe cognitive impairment or a previous history of mental illness. Patients with breast cancer participated in expressive writing once a week for three weeks, a total of three times. The first was to write down the deepest feelings and thoughts of the breast cancer experience, the second was to write about the stress and coping strategies faced during the breast cancer experience, and the third was to write about the positive thoughts and feelings since the disease. Then the expressive writing of the text materials to do content analysis.

2.2. Data Collection

The semi-structured interview approach was adopted and conducted in the oncology outpatient room. Each

respondent's interview persisted for 30 to 50 minutes, with the entire process being recorded using a voice recorder. Prior to the interview, the respondents were apprised of the research purpose, interview content, and requisite time. The content of the interview includes the following aspects: (1) Does the illness possess any positive significance for you? (2) What alterations has the disease and treatment process brought to your life? (3) What gains have you acquired from the process of expressive writing?

2.3. Data Analysis

After the interview, convert the recording into text. Two researchers independently analyzed the transcribed textual data and written text content using the Colaizzi 7-step analysis method. Carefully read the material, mark meaningful statements, encode recurring information, summarize the viewpoints that appear after encoding, write detailed and exhaustive descriptions, identify similar viewpoints, extract meaningful common concepts, and elevate them to form a theme. In the process of data analysis, researchers hold their own opinions, and in case of disagreements, the research team of this study will jointly discuss and determine.

3. Results

3.1. Themes of Post-Traumatic Growth

The psychological experiences of post-traumatic growth in breast cancer patients during the rehabilitation period comprise five themes: gratitude and post-traumatic growth after cancer, encompassing personality change, changes in relationships with others, changes in life, meaning of disease, and gratitude and dedication. The theme of personality change encompasses three factors: regulating emotions, accepting changes, and affirming oneself. The theme of changes in relationships with others consists of three factors: more harmonious family relationships, more interaction with friends, and greater concern for people around. The theme of changes in life incorporates three factors: decelerating the pace of life, cherishing the present life, and creating the meaning of life. The theme of the meaning of disease includes three factors: perceiving the power of life, experiencing the true meaning of life, and contemplating the meaning of life. The theme of gratitude and dedication encompasses three factors: having a heart of gratitude, sharing experiences, and helping others.

3.2. Themes of Expressive Writing

The text content of expressive writing by breast cancer patients during the rehabilitation period features five dimensions: factual description, emotional expression, self-affirmation, cognitive reappraisal, and discovery of meaning. The writing in the factual description dimension involves detailed expressions in five aspects: me and breast cancer, me and the doctor, me and my family, me and my friends, and me and my beliefs. The description of the emotional expression dimension comprises specific delineations in five aspects: the shock and fear of diagnosis, the injustice and confusion of illness, the pain and sadness of treatment, the unease and anxiety about the future, and the expression of suppressed emotions within the social support system. The description of the self-affirmation dimension includes specific expressions in five aspects: affirmation of the overall self-concept, affirmation of trait self, affirmation of family relationships, affirmation of social relationships, and affirmation of religion and spirituality. The description of the cognitive reappraisal dimension consists of specific expressions in five aspects: reflection on the cause of cancer, rational attribution of cancer, assessment of physical functions after cancer, evaluation of social cognition of breast cancer, and attribution of attitude towards death and changes in beliefs. The description of the discovery of meaning dimension includes specific expressions in five aspects: discovery of the meaning of cancer, re-evaluation of personal value, changes and hopes in life, gratitude and return in social relationships, and affirmation and appreciation of nature and life.

4. Discussion

The psychological experiences of the 15 patients with breast cancer in the rehabilitation period demonstrated in this study that the patients underwent cognitive defense upon disease detection, disease adaptation and control during the treatment process, and began to reflect actively on the disease and life, presenting post-traumatic growth after cancer trauma, which is in line with the relevant studies conducted by scholars both domestically and internationally [12,13]. Studies on post-traumatic growth and post-traumatic stress disorder have disclosed that at the initial stage of disease diagnosis, post-traumatic stress symptoms predominate. Once patients accept the reality of the disease, post-traumatic growth ensues, and the two exhibit a curvilinear correlation [14,15]. Studies on the influencing factors of post-traumatic growth in breast cancer patients have indicated that early cancer-related stress and anxiety are positively correlated with post-traumatic growth [16, 17]. Individuals with minor impacts from traumatic events have a low level of post-traumatic growth, while those with moderate impacts from traumatic events and cognitive processing of the events have a high level of post-traumatic growth [18]. The post-traumatic growth theory posits that negative cognition, negative emotions, and helpless predicaments can induce mental distress. Persistent distress prompts individuals to enter repetitive thinking and rumination, and active rumination is a key factor in the formation of post-traumatic growth [19, 20].

Post-traumatic growth does not emanate from the traumatic event per se but rather from the individual's confrontation with the traumatic event. The positive alterations following trauma do not mitigate the pain but rather represent the positive comprehension of core life issues such as self, interpersonal relationships, and life during the process of experiencing the pain [21]. Cancer, as a traumatic event, has impacted the individual's original worldview, disrupted the original life order, and introduced a high degree of uncertainty. After experiencing the pain of rumination and being accepted subsequent to self-disclosure, patients also commence to exhibit acceptance of themselves, the disease, and changes. When self-evaluation undergoes alterations, the individual's social functions also change, manifesting as more harmonious family relationships, increased interaction with friends, and greater concern for others. The experiences of life and death and various human conditions during the illness and treatment process prompt individuals to think more profoundly about the fragility of life and have a clearer orientation of life goals.

The theoretical model of this expressive writing research design is emotional disclosure, narrative expression, and benefit discovery. In the first week, by penning down the innermost feelings and thoughts during the experience of breast cancer, emotional disclosure was initiated. During the

stressful event of breast cancer diagnosis and treatment, patients often conceal the fact of the disease, eschew social interaction, and close their inner world [22]. Especially in the Chinese cultural context, it is commonly held that "family ugliness should not be exposed" and "illness is not a glorious thing". For many people, disclosing personal experiences and painful emotions verbally is a challenging undertaking. Expressive writing can disclose the inner emotions and thoughts of breast cancer patients in a private manner. "Thank you for the opportunity to participate in this study. Through writing, I can confide my experiences and tell my story without concerns." The founder of expressive writing, Pennebaker, discovered that the exposure and expression of negative emotions and traumatic experiences can alleviate the stress resulting from traumatic experiences and negative emotions [23].

In the second week, by writing about the pressures and coping strategies confronted during the experience of breast cancer, narrative expression was emphasized. Narrative is a verbal act and a fundamental mode of human cognition. People construct an experience of practical significance to themselves by recounting experienced events [24]. Expressive writing, as a narrative carrier, is a process of clarifying inner activities through written language. Through the description of the pressure, ideas, coping strategies, etc. in the experience of breast cancer, reconstruct a complete narrative about breast cancer, increase the level of clear awareness of cancer events, and thus improve the psychological feelings brought by cancer clinics. By writing and concretizing the memory of negative events in the narrative, and describing the pressures, thoughts, a complete narrative of the stressful breast cancer event is reconstructed, increasing the degree of clarity of awareness of the cancer event. Klein et al.'s study found that expressive writing can effectively reduce intrusive thoughts [25]. "Cancer is like a bomb that tore my life apart. But after continuous writing for some time, it seems to help me stick the fragments back together." Chu et al.'s study on expressive writing by breast cancer patients revealed that expressive writing can reduce hypervigilance symptoms in patients and alleviate the intrusive and avoidant symptoms brought about by cancer as a stressful event, facilitating the patient's disease recovery [26].

In the third week, by writing about the positive thoughts and feelings since the illness, patients were guided to discover benefits. Post-traumatic growth is the positive change that occurs in individuals during the process of experiencing a traumatic event [27]. Relevant studies have shown that breast cancer patients, after experiencing disease adaptation and control, begin to reflect positively on the disease and life, demonstrating post-traumatic growth after cancer six months after surgery [28,29]. The thinking and rational attribution of the cause of cancer by breast cancer rehabilitators are the information processing and cognitive reappraisal processes of cancer patients regarding cancer stress events. Tedeschi, the proponent of the concept of post-traumatic growth, believes that the individual's cognitive processing of trauma information is a crucial process for generating post-traumatic growth, and self-disclosure is an important factor in post-traumatic cognitive processing [30]. "Since it's like this, let it go with the flow, follow the changes, and also allow myself to change." Due to the disease, patients commence to reflect on their past lifestyle and attempt new healthy lifestyles.

The self-affirmation theory posits that through the re-anchoring of significant self-values, individuals no longer focus on the threat of the stressful traumatic event but rather on the meaning and value of the event itself. Thus, the stressful event that threatens the self loses its threatening capacity [31]. "I will donate some money to the victims of the earthquake-stricken area because I deeply understand how much people in difficulties need others to extend a helping hand." People can view themselves and the traumatic experience from a broader perspective by affirming self-values in areas unrelated to the threat. Patients who have experienced a cancer event develop a "survivor's mission" during the rehabilitation period, transforming the individual's perception from vulnerability and distrust after trauma to a more positive view of others and the world [32]. "Now I no longer complain about this disease. It has enabled me to perceive true human feelings, return to my family, and truly understand life." Cafaro and Gallagher et al.'s studies on cancer patients also indicate that expressive writing has a positive impact on post-traumatic growth after cancer and promotes cancer rehabilitation patients' cognitive reappraisal and discovery of meaning regarding the disease and life [33, 34]. Meaning is the product of various human practical activities, a creative activity of human survival methods. Expressive writing, as a narrative carrier, provides an opportunity to return to factual description, emotional expression, self-affirmation, cognitive reappraisal, and discovery of meaning, allowing individuals facing trauma to achieve the process of re-constructing the meaning of life, from "becoming ill in a muddled way" to "living meaningfully and clearly".

5. Conclusion

The expressive writing can promote the post-traumatic growth of breast cancer patients. The potential therapeutic mechanism of expressive writing in breast cancer survivors includes five factors: fact description, emotional expression, self affirmation, cognitive reappraisal, and meaning discovery.

Acknowledgments

We would like to thank the breast cancer survivors who participated in this study and contributed to its accomplishment;

This work was supported by a grant from the Guangdong Philosophy and Social Sciences 13th Five Year Plan Project (GD20XXL06).

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