

Research Progress on the Application of Self-Compassion in the Management of Psychological Symptoms among Breast Cancer Patients

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Abstract

This review examines the psychological symptoms experienced by breast cancer patients, the relationship between self-compassion and psychological symptoms, and the current application status of self-compassion interventions in this population. The aim is to provide a reference for establishing a localized self-compassion intervention framework in China and enhancing the mental health of breast cancer patients.

Keywords

Self-Compassion, Breast Cancer, Psychological Symptoms, Review

1. Introduction

Worldwide, breast cancer is the most common type of malignancy among women [1]. According to the global cancer epidemiological data published in 2022, there were 2.3 million new breast cancer diagnoses and 670,000 deaths due to cancer worldwide in that year [2]. The variety of physical adverse effects caused by treatment of breast cancer, including mastectomy defects, postoperative scar formation and sexual dysfunction, may cause a very strong psychological strain on patients [3]. Such negative physical consequences can disturb the family peace, hinder normal social interaction and resumption of work and finally result in significant decline in overall living quality of patients [4]. Being a form of positive psychological adjustment, self-compassion is described as the ability of patients to accept their

true situations and unchangeable problems. It allows people to accept their own personal suffering logically and release negative self-blame and extreme self-criticism [5]. Multiple empirical articles have proven [6] [7] that self-compassion as a practice can reduce negative psychological sensations, enhance individual psychological adjustment, and increase the level of subjective well-being among breast cancer survivors. Over the past few years, medical professionals in China have continued to investigate and refine effective psychological intervention strategies and standardized management measures in the treatment of breast cancer patients. These measures have been very instrumental in enhancing the living condition of patients and increasing their compliance with the clinical treatment. However, the domestic research and practice system is still far behind the advanced international standards in this area. The article will discuss the current developments of self-compassion-based intervention used in psychological symptom management of breast cancer patients, with a view to offering practical suggestions of localized psychological intervention work in China.

2. Analysis of Psychological Symptoms in Breast Cancer Patients

Clinical studies have shown [8] [9] that people with cancer experience six to nine coexisting physical and mental health issues during the course of their illness. These diverse health issues have a tendency of being present over an extended period of time and are interlinked with each other, leading to significant and cumulative stress related to symptoms. Psychological symptoms in the context of this work are wide in their scope, including both negative emotional and cognitive responses. It is a wide range consisting of anxious feelings, depressions, fear of cancer recurrence, sleep issues and body image issues, as well as other unpleasant mental conditions such as sadness, moodiness, nervousness, and emotional instability. Psychological difficulties experienced by patients with breast cancer continuously change at different stages of the disease, including the initial diagnosis, intensive treatment, long-term survival recovery, and terminal care stages. Most individuals do not psychologically adjust to their cancer diagnosis. The enormous psychological effects of the disease confirmation are capable of inducing an array of negative psychological reactions, the dominant ones being anxiety and depression, and extreme hopelessness and self-negativity, which significantly impair the willingness of patients to work with the medical treatment [10]. Sleep disorders, sorrow, anxious feelings and nervous tension are commonly reported, intense and disturbing psychological problems amongst breast cancer patients during the perioperative phase, according to the research conducted by Pan *et al.* [11]. Patient anxiety, mood swings and acute body image discomfort are also often triggered by chemotherapy treatment and are all typical psychological issues covered by this study. These mental conflicts influence the patient attention focus and create a vicious circle, which worsens sleep issues and psychological stress [12]. Anxious emotion-based mental health problems are still frequent even 12 months af-

ter chemotherapy treatment completion among breast cancer survivors [13]. A research group led by Jing [14] also noted that emotional swings and irritability are significant psychological obstacles to patients undergoing endocrine therapy. On the whole, patients of breast cancer experience complex and prolonged psychological burdens. Such widespread psychological problems persist throughout the entire course of the disease and create self-reinforcing negative feedback loops, which negatively impact patients in their daily life, their social interaction and active participation in clinical treatment [15].

3. Current Status of Self-Compassion among Breast Cancer Patients

3.1. Analysis of the Current Status of Self-Compassion among Breast Cancer Patients

A number of empirical studies [16] [17] have shown that breast cancer survivors have an average level of self-compassion. The authors of this work, Li *et al.* [18], also found that it was true that these patients have ample space in self-compassion, and their present condition is not optimal. Self-compassion as a valuable psychological resource, allows people to produce positive emotions and form confidence when facing adversities. This reinforces personal self-efficacy, triggers internal motivation, and effectively alleviates built-up emotional repression [19]. Higher levels of self-compassion in patients allow them to deal with the physical and psychological stress of the disease more effectively and have a more positive outlook towards the treatment process, enhancing the quality of treatment and improving the quality of life. Those who are more physically and mentally resilient to the effects of cancer diagnosis and treatment have higher levels of self-compassion. They are likely to develop a more positive attitude regarding clinical management that results in improved therapeutic benefits and quality of life. Therefore, it is important to note that psychological interventions aimed at raising self-compassion levels are very significant in practice for the population of breast cancer. These supportive strategies help to recover both physical and mental conditions of the patient, and also release some of the care loads on the families and decrease the associated social medical care costs.

3.2. Assessment Tools for Self-Compassion

3.2.1. Self-Compassion Scale (SCS)

The Self-Compassion Scale [20] was created by Neff in 2003. It has six dimensions made up of three pairs of opposites, namely self-kindness and self-criticism, common humanity and isolation, and mindfulness and over-identification. Every pair of opposites has two aspects, including positive and negative that interact with each other to define the degree of self-compassion. There are altogether 26 items on the scale: 5 items to measure self-kindness, 5 items to measure self-criticism, 4 items to measure common humanity, 4 items to measure isolation, 4 items to measure mindfulness, and 4 items to measure over-identification. This uses a 5-

point Likert scale, starting with Never to Always; negative items are reverse-scored. The score is between 26 and 130 and a high total score indicates a high level of self-compassion. Its Cronbach alpha coefficient is 0.92 and test retest reliability is 0.93. At present, it is the most frequently adopted tool to assess self-compassion and has been translated into various languages; the scale was localized into Chinese by the Chinese researchers Chen *et al.* [21] in 2011; it is the most popular self-compassion measurement tool in China at present, and the Chinese version of SCS has been utilized in the area of breast cancer [22] in China. SCS is mainly used as a baseline or as an efficacy assessment in creating treatment plans like Mindfulness-Based Cognitive Therapy [23] and Acceptance and Commitment Therapy [24].

3.2.2. Self-Compassion Scale—Short Form (SCS-SF)

The Self-Compassion Scale-Short Form (SCS-SF) was created by Raes *et al.* [25] in 2011. It is a 12-item scale that involves two items selected out of the six dimensions of Neff's SCS to create the short-form version. It is based on a 5-point Likert scale, where the answer options include: Strongly disagree, Disagree, Neither agree nor disagree, Agree and Strongly agree. The scale has a Cronbach 0.87 which means that it is reliable and valid. Through its substantial decrease in the number of items, this scale does not take much time to complete the questionnaire but retains the same validity as the SCS. MENG *et al.* [26] created a Chinese version of this scale in 2019, which contains 10 items and is rated on a 5-point Likert scale (Almost never (1) - Almost always (5)). The Cronbach alpha coefficient of the scale is 0.686 and the test-retest reliability is 0.617. SCS-SF is an efficient tool in the efficiency-oriented environment; it is especially well-suited to large-scale surveys, quick assessment of the effect of interventions, clinical screening and monitoring, and repeated application with other scales. It can be used with children, adolescents, older adults, or people of limited attention span or time, and has been extended to breast cancer populations [27].

The full-length SCS is the best in case of breast cancer studies and regular clinical testing because it allows measuring outcomes before and after an intervention with great precision, while the short-form version of SCS, SCS-SF, is more appropriate to use when it is necessary to perform a rapid mass clinical screening or repetitive multi-scale combined evaluations.

4. Recent Studies on the Association between Psychosocial Manifestations and Self-Compassion in Breast Cancer Survivors

4.1. Associations between Self-Compassion and Core Negative Psychological Symptoms

Self-compassion has an intimate and inverse relationship with a wide range of less desirable psychological states that are prevalent amongst breast cancer patients; it includes body image issues, anxiety symptoms, depression symptoms, and overall psychological pressure. In case of those patients who have had a mastectomy,

compassionate self-perception is an essential protective element that reduces the level of body image dissatisfaction, anxiety and depression [28] [29]. Garabedian *et al.* [30] found similar results throughout their research, which demonstrated that high levels of self-compassion can significantly alleviate total psychological distress within people with breast cancer. Besides reducing various negative emotional experiences, this healthy psychological attribute may also be used to predict future better mental health and higher quality life of breast cancer survivors [31].

4.2. Mechanisms Underlying the Protective Effects of Self-Compassion

Self-compassion is an important psychological buffer to reduce ongoing negative emotions and cumulative symptoms of stress by using both physiological and cognitive processes. At the biological level, this beneficial psychological property enhances the secretion of endorphins and oxytocin in the human body and curbs overstimulation of the sympathetic nervous system. All these physiological alterations are effective in reducing mental stress and improving people's psychological resiliency towards adversities [32]. Cognitively speaking, self-compassion enables patients to accept themselves positively instead of engaging in self-criticism during times of suffering due to sickness and failure. In this adaptive attitude, patients can access internal psychological potential and subsequently become more resilient to the challenge of emotional and physical difficulties [33].

5. Current Applications of Self-Compassion among Breast Cancer Patients

5.1. Mindful Self-Compassion (MSC) Training

A standardized eight-week training course with weekly 2.5-hour learning sessions [34], MSC program is developed by self-compassion research pioneer Kristin and clinical psychologist Christopher. The training program includes mindful meditation practice, self-kindness training and emotional regulation skills training. People who are not suffering from any illness, as well as those who are ill, can be assisted to develop compassionate attitudes towards themselves. One neuroimaging study using magnetic resonance imaging technology [35] confirmed that this systematic self-compassion training is capable of optimizing the prefrontal cortical control of the amygdala. It reduces the amount of stress-related hormones released, which enhances the function of the human immune system and weakens the effect of negative affective stimuli on the nervous system. Caroline and her research team [27] confirmed that this systematic self-compassion training is capable of optimizing prefrontal cortical control of the amygdala. It reduces the secretion of stress-related hormones and thus enhances the function of human immune system and inhibits the neural effects of negative affective stimuli on the nervous system. Chinese investigators Chen *et al.* [36] modified the original standard framework and conducted an abbreviated six-week MSC intervention involving 64 patients with breast cancer. Mindfulness-based exercises were used

in the research to assist the participants to perceive and accept physical changes resulting from illness and treatment. The final results found that there were significant improvements in self-compassion ability, self-acceptance level and stress perception among participants in the intervention group, whereas their negative feelings about physical appearance were significantly alleviated. Being an empirically verified psychological intervention tool, the MSC can be highly effective in enhancing emotional conditions of the population, curbing excess self-criticism, increasing psychological resilience and optimizing interpersonal relationships, with wide-ranging benefits to various categories of users [37]. However, it needs professional assistance to implement this intervention and its ultimate effectiveness depends on sustained and standardized execution. Individual differences should be considered by clinical practitioners when implementing the strategy in practice. Novice learners of this training approach might face typical challenges such as unclear comprehension of the central ideas or slight emotional discomfort in the process of learning.

5.2. Self-Compassionate Expressive Writing (SCEW)

Expressive writing is one of the intervention programs that were created by Pennebaker and Beal (also referred to as written disclosure, written emotional disclosure, or focused expressive writing) [38]. The beneficial impact of expressive writing on body image can be based on the idea that it promotes positive self-attitudes, which is a process that intersects with the self-compassion theory. Expressive writing is traditionally performed by having participants write every day at home three to four days in a row to express their emotions and thoughts with each of these writing sessions lasting between 10 - 15 minutes [39]. Nevertheless, a meta-analysis indicated that traditional expressive writing is ineffective in improving symptoms, psychological health, cognitive functions, and sleep quality among individuals with cancer [40]. Przewdzicki *et al.* [41] mixed self-compassion with an online expressive writing intervention, My Changed Body, where breast cancer patients were asked to spend 30 minutes writing on a web page, which was augmented by a 5-minute audio meditation focusing on self-compassion. It was found that the participants in the writing intervention group had significantly lower body image distress, significantly higher body appreciation, and significant improvements in depression, anxiety and self-compassion. At present, self-compassion with expressive writing has neither been used to help breast cancer patients in China, nor have interventions gone beyond traditional expressive writing [42]. Traditional expressive writing interventions have a double cost in time and money, which impedes access to them by breast cancer patients who need psychological assistance. In contrast, short-term online self-compassion writing interventions do not simply radically change the way patients view the distressing events and themselves, allowing them to restructure their thinking in a more constructive way, but also do not entail the purchase of special devices and are not limited by geographical location. Nurses can easily apply this intervention,

which is safe and convenient, and patients can freely plan their writing schedules, and therefore, there is a high level of adherence.

5.3. Cognitively-Based Compassion Training (CBCT)

CBCT is a mind-training program based on Tibetan Buddhism that was developed by Lobsang to help women who have recovered from breast cancer. It consists of an 8-week course, held once a week (2 hours per session), divided into 6 modules, combining lectures, classroom discussions, and guided meditation to develop empathy and prosocial behavior in patients. CBCT can increase stress resilience by affecting the hypothalamic-pituitary-adrenal axis and the immune system [43]. A CBCT trial was performed by González-Hernández *et al.* [44] on 28 breast cancer survivors; the intervention group engaged in a 6-module CBCT course and the control group was given regular care. Six months later, findings indicated that CBCT alleviated the fear of cancer recurrence related to psychological stress in breast cancer survivors and improved their abilities to be self-kind, self-compassionate, observant and mindful. CBCT has also been found to provide additional benefits to the health of non-cancer populations, such as decreasing stress-induced inflammatory responses in young adults and foster youth and enhancing the mental health of breast cancer caregivers [45]. Also, it helps patients to restore logical and realistic thinking about their physical condition after medical care. This diminished gap between the actual physical state and expected ideal self also helps reduce negative attitudes and emotional pain. Although these are present, there are still practical constraints to CBCT to patients under active treatment or early post-treatment recovery. It is very hard to do so because they cannot clearly realize all cognitive errors and maladaptive thoughts connected with negative body image. Constant exposure to negative self-thoughts might rather lead to mental exhaustion, add additional psychological tension and eventually worsen their mental health loads [46].

5.4. Compassion-Focused Therapy (CFT)

CFT initially introduced by Gilbert using the framework of social mindset theory and motivation theory. It is aimed at incorporating a range of psychotherapeutic methods to change competitive motivations into compassionate ones, with emphasis placed on minimizing shame and self-criticism by developing self-compassion. Initial studies on CFT have been conducted on individuals with chronic and severe mental health problems [47]. Compassion skills training in CFT mainly consists of: directing one's own thoughts and actions in a kind-hearted fashion, responding to feelings compassionately, and utilizing images to develop compassion. Another research group incorporated developmental explanations of fears of cancer recurrence with the fundamental principles of compassion-centered therapies to come up with a new Fear-focused Compassion Therapy system [48], which included an 8-week group compassion mindfulness training course of young breast cancer survivors, with special emphasis on symptoms that are asso-

ciated with fear of cancer recurrence. The scheme made use of a group-based compassion and mindfulness training program that lasted eight weeks to cater to young breast cancer patients, focusing on distressing symptoms related to fear of recurrence of the disease. This novel intervention balances the activities of sympathetic and parasympathetic nervous systems by enhancing self-compassion of patients, which efficiently reduces their fear level of recurrence of cancer. The results of the study showed that enhanced self-compassion allowed people to avoid exaggerating the risks and threats of cancer recurrence. It also reduced selective cancer-related attention and alleviated repetitive negative thoughts. Clinical usage of CFT is very popular outside the country and current evidence confirms its effectiveness to enhance self-compassion in diverse clinical populations [49]; CFT may be used together with mindfulness training and cognitively-based interventions to develop multi-level psychological treatment programs. However, it has some practical constraints. It requires trained professional therapists with uniform training, is highly demanding operationally, and requires a lengthy intervention time to produce noticeable clinical outcomes. Besides, the clinical staff must be careful in applying CFT during the acute phase of trauma stress or severe depressive episodes.

6. Outlook

There is an emerging literature suggesting that self-compassion may be effective against psychological disorders in breast cancer patients, but current empirical results have serious shortcomings. The majority of the existing studies are based on a scheme of cross-sectional research that does not allow establishing causal relations firmly. Also, many studies include a very small sample size, which makes it challenging to generalize the findings to larger populations of patients. More so, there is a dire lack of cultural adjusted self-compassion interventions programmes that are specific to breast cancer patients in the Chinese society. Because of the above research gaps, combined with the complex issue of psychological challenges faced by breast cancer survivors and confirmed effectiveness of self-compassion therapy in alleviating their psychological suffering, this paper will offer some recommendations to direct further in-depth local research on the use of self-compassion in psychological breast cancer nursing. Existing approaches to interventions often involve offline personal guidance and are relatively less diversified and limited self-compassion interventions. Based on the experience of mature overseas study results, clinical nursing practice in China has the potential to include a variety of intervention methods in the future, such as online based self-compassion courses, cognition based compassion training, expressive writing therapy focusing on self-acceptance, and compassion focused psychological treatment. Currently most scholars in China use generalized Chinese self-compassion evaluation measures and no professional instruments to measure self-compassion in breast cancer patients are present. A specific self-compassion scale should be developed that would reflect both the cultural environment of China and the peculiarities of

psychology of breast cancer patients. More precise predictive models can also assist scholars in explaining the inner workings of self-compassion in enhancing the mental state of patients and enable a holistic prediction of the onset and progression of psychological disorders in this group of patients. Much of the current domestic research uses cross-sectional surveys and simple factor analysis. Cohort studies and longitudinal tracking over time could be focused on in future academic research to investigate the changing self-compassion levels during different stages of a disease and the relationship between self-compassion and psychological aspects of patients over a longer period. Besides, intervention programs with involvement of family members can be created. These inclusive approaches can create a sense of empathy between patients, their family members, and medical personnel and thereby enhance the general quality of clinical psychological nursing care.

7. Summary

The current paper is based on the latest advances in the academic literature on the role of self-compassion in enhancing the psychological well-being of people living with cancer, specifically breast cancer. The available evidence suggests that self-compassion has a very high potential for reducing emotional suffering among these patients. Foreign researchers have already implemented compassion-based psychological interventions on a large scale and the results of their application were encouraging, whereas the similar domestic studies are not well developed yet. Onwards, it is necessary that the local medical and research groups should go ahead, create and apply self-compassion intervention programs in clinical practice. Increasing the use of the psychological tactics will add more benefits to the mental health of breast cancer survivors. These continuing developments will also ensure that the psychological care provided to the patients being treated by breast cancer is more comprehensive and individualized.

Author Contributions

Conceptualization, Shasha Li and Mei Yan; methodology, Ting Yang; formal analysis, Zixuan Zhou; writing—original draft preparation, Sisi Huang; writing—review and editing, Shasha Li; supervision, Mei Yan. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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