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The Effectiveness of Emotion-Focused Therapy on Self-Conscious Affect, Illness Perception, and Mental Rumination in Breast Cancer Patients

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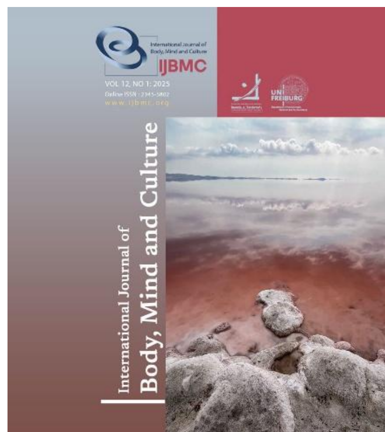

ABSTRACT

Objective: This study aimed to determine the effectiveness of emotion-focused therapy on self-conscious affect, illness perception, and mental rumination in breast cancer patients.

Methods and Materials: The research method was quasi-experimental with a pre-test, post-test, control group, and six-month follow-up. From the entire population of breast cancer patients in District 15 of Tehran, 30 individuals were selected using convenience sampling and randomly assigned to experimental and control groups. Questionnaires used included the Self-Conscious Affect Questionnaire (Tangney et al., 1989), the Brief Illness Perception Questionnaire (Broadbent et al., 2006), and the Ruminative Responses Scale (Nolen-Hoeksema & Morrow, 1991). The experimental group underwent emotion-focused therapy for eight 90-minute sessions. Post-tests were conducted for both groups, and data were analyzed using covariance analysis.

Findings: Findings showed that emotion-focused therapy positively and significantly improved self-conscious affect, illness perception, and mental rumination ($P<0.05$).

Conclusion: The present study indicated that emotion-focused therapy could be appropriate for the psychological health of breast cancer patients by improving self-conscious affect, illness perception, and mental rumination.

Keywords: illness perception, emotion-focused therapy, mental rumination, self-conscious affect

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Introduction

Cancer, as a chronic and non-communicable disease, encompasses many diseases. Among the various types of cancer, breast cancer is the most common cancer in women worldwide, following lung and stomach cancers (Lingens et al., 2021). Breast cancer, as its name suggests, occurs in the breast tissue of women and involves all internal organs of the breast, gradually destroying them over time (Yang et al.). Breast cancer is defined as the uncontrolled growth of cells in the breast tissue, originating in the milk-producing glands (lobules) or the ducts that connect the lobules to the nipple (ducts) (Lee & La). The incidence rate of breast cancer is increasing annually by 5.9% (Chin & Mansori). Breast cancer was the fourth leading cause of cancer death in 2020 (Sung et al.). In Iran, breast cancer accounts for 34% of cancers among women, with Iranian women developing the disease a decade earlier than women in Western countries (Shakery et al.).

Among the problems faced by cancer patients are anxiety, depression, hopelessness, and feelings of shame and guilt. Among these, feelings of shame and guilt, which are critical components of self-conscious affect, play a significant role in the quality of life of individuals (Yu et al., 2023). The relationship between cancer and feelings of shame and guilt can be seen as an illogical, reciprocal, and multifaceted interaction, as being diagnosed with cancer inflicts a severe psychological blow, creating feelings of worthlessness and inadequacy, which in turn lead to guilt (Dewi et al.). (Tsantakis et al., 2023 guilt, and pride) emphasize that immediate breast reconstruction after mastectomy leads to better psychological and sexual well-being, although it does not directly address guilt and shame levels. It interestingly finds no direct connection between the timing of breast reconstruction and feelings of guilt and shame, highlighting the importance of immediate reconstruction for quality of life, which can indirectly affect these feelings.

A significant psychological and behavioral variable in treating cancer is the perception of illness, which is based on obtaining information from various sources and the patient's beliefs, potentially affecting mental health and the ability to cope with the disease. Illness perception includes information across five dimensions: the nature of the illness (label and related symptoms like fatigue and weakness), the cause or beliefs about what triggered the illness, the duration or perception of how long the illness will last (acute or chronic), the expected consequences (economic, social, psychological, and physical effects), and the efficacy of control, treatment, and recovery. Addressing mental rumination in this context is essential (Borstelmann et al.).

Mental rumination is characterized by persistent and non-productive deep reflection based on cognitive-behavioral traits that surface during stressful life situations, where individuals become preoccupied with adverse past events, leading to depression and critical behavioral responses (Bravo et al.).

Various therapeutic and educational methods have been applied to breast cancer patients to improve psychological components. One of the new therapeutic approaches is emotion-focused therapy, which has shown clinical efficacy in various studies. Emotion-focused therapy, an integrative approach for dealing with anxiety disorders, trauma, and life stressors, has been in use since 1990 for both individual and couple therapy (Johnson, 2019). This therapeutic approach posits that emotions inherently have an adaptive potential that, when activated, can help clients change problematic emotional states or unwanted experiences. Emotion-focused therapy is a structured, short-term approach that processes and regulates the emotions of breast cancer patients to convert them into more adaptive responses. Constrained or overwhelming emotional responses can be clearly expressed in a safe therapeutic environment (Power). Emotions serve as tools for therapists to create change in patients, allowing individuals to express their innermost aspects regarding external events. Emotion-focused therapy combines intrapsychic and interpersonal factors into a systemic approach.

Considering the psychological and emotional harm experienced by individuals with breast cancer, such as feelings of shame and guilt, illness perception, and mental rumination, along with the efficacy of emotion-focused therapy in reducing psychological harm and improving psychological processing, researchers decided to examine the effectiveness of emotion-focused therapy on self-conscious affect, illness perception, and mental rumination in breast cancer patients. Thus, the main research question was to determine the

effectiveness of emotion-focused therapy on these variables in breast cancer patients.

Methods and Materials

Study Design and Participants

This research is applied in terms of its purpose and quantitative in terms of data type. It utilized a quasi-experimental method with a pre-test and post-test design, including a control group. The statistical population consisted of all women with breast cancer in District 15 of Tehran. This study employed a convenience sampling method, selecting participants from the breast cancer patient population in District 15 of Tehran. Convenience sampling was chosen due to its practicality and ease of access to subjects; however, this approach may introduce selection bias and limit the generalizability of the findings. Future studies should consider random sampling techniques to enhance representativeness and reduce potential biases.

Participants were selected based on specific inclusion and exclusion criteria to ensure the sample's relevance to the study objectives. Inclusion criteria were as follows: Diagnosis of breast cancer, Age between 30 and 60 years, no history of major psychiatric disorders and willingness to participate in the study and attend therapy sessions. Exclusion criteria included: ongoing participation in other psychological treatments, advanced stage of cancer (Stage IV), and concurrent severe physical illnesses. These criteria helped control for demographic and clinical characteristics that could influence the outcomes, ensuring a more homogeneous sample.

Appropriate sample size for experimental and control groups depends on various factors, including the research design, objectives, the desired statistical power, and ethical considerations (Chow). It is suggested that a minimum of 15 participants per group is advisable to achieve meaningful results (Crowe et al.).

Data Collection Tools

Self-Conscious Affect Questionnaire (TOSCA): This questionnaire was designed by J.P. Tangney and colleagues (1989). It is a self-report tool that measures four types of self-conscious affect: guilt-proneness, shame proneness, alpha pride, beta pride, and styles of attribution related to externalization and detachment. Responses are scored on a 5-point Likert scale ranging from 1 "never" to 5 "very likely." In the present study, only the scales for shame and guilt were used. In a study by Marshall et al. (1996), Cronbach's alpha for the shame and guilt scales in a student population were reported as 0.77 and 0.78, respectively. In the study by Khodabakhsh Pirklani and Safaeyan (2019), Cronbach's alpha for the shame and guilt scales were reported as 0.80 and 0.73, respectively.

Brief Illness Perception Questionnaire (Brief IPQ): This brief questionnaire, developed by Broadbent and colleagues (2006), consists of 9 questions designed to assess patients' emotional and cognitive representations of their illness. The Brief IPQ includes scales for consequences, timeline, personal control, treatment control, identity, concern, understanding, emotional representation, and illness coherence. Concurrent validity of the scale with the revised Illness Perception Questionnaire in a sample of patients with asthma, diabetes, and renal disease showed subscale correlations ranging from 0.32 to 0.63.

Ruminative Responses Scale: Developed by Nolen-Hoeksema and Morrow (1991), this scale evaluates four types of responses to negative mood. It consists of two subscales: ruminative responses and distracting responses. The ruminative responses subscale includes 22 items, where respondents rate each item on a scale from 1 "never" to 4 "always." Empirical evidence indicates high internal consistency for the ruminative responses scale, with Cronbach's alpha ranging from 0.88 to 0.92 and test-retest reliability of 0.67. In the present study, the reliability of this questionnaire was found to be 0.89 using Cronbach's alpha.

Intervention

The experimental group participated in Emotion-Focused Therapy (EFT) across eight 90-minute sessions according to Greenberg's model (2015). EFT was selected for its proven effectiveness in addressing emotional distress and enhancing emotional processing. Each session followed a structured format, beginning with emotional awareness exercises, followed by techniques to process and transform maladaptive emotions. The number and duration of sessions were based on standard EFT protocols, which suggest that

eight sessions are sufficient for significant therapeutic impact.

Session 1: Establishing Rapport and Commitment to Therapy

The first session focuses on building a strong therapeutic alliance and creating a safe, supportive environment. The therapist introduces the principles of Emotion-Focused Therapy (EFT), emphasizing the importance of emotional awareness and expression. Participants are encouraged to explore their comfort with focusing on internal experiences and sharing emotions. The therapist assesses each participant's ability to reflect on their emotions and provides psychoeducation on how EFT helps process unresolved emotional experiences. Initial concerns and expectations are discussed to ensure commitment to the therapy process.

Session 2: Identifying Dysfunctional Interaction Cycles

In this session, participants explore the patterns of emotional interactions in their relationships and learn to identify dysfunctional cycles that contribute to distress. The therapist helps participants recognize conflicting emotions about themselves and significant others, such as feelings of love and resentment coexisting. Participants are guided to examine self-critical thoughts and their impact on emotional regulation. Through guided exercises, they begin identifying key emotions driving their relational difficulties and are encouraged to express them constructively.

Session 3: Recognizing Core Emotions and Emotional Labeling

This session focuses on deepening emotional awareness by identifying core emotions such as sadness, anger, fear, and joy, along with their associated needs. Participants learn to label their emotions in the present moment, helping them distinguish between primary and secondary emotions. The therapist facilitates discussions on how emotions influence decision-making and interpersonal interactions. Participants engage in experiential exercises to practice emotion identification and expression, fostering emotional clarity and self-awareness.

Session 4: Exploring Hidden Emotions through Two-Chair Dialogues

The therapist creates conditions that elicit typically unpleasant emotional experiences related to participants' past and present relationships. Using the two-chair technique, participants confront internal conflicts by expressing emotions from both the "experiencing self" and the "critical self." This technique helps uncover primary emotions hidden beneath defensive reactions such as anger or avoidance. Participants learn to challenge negative self-perceptions and process unresolved emotions in a structured, supportive manner.

Session 5: Moderating Self-Criticism through Empty Chair Technique

This session focuses on reducing self-criticism and emotional distress. Participants learn relaxation techniques to manage emotional overwhelm and are encouraged to modify self-critical inner dialogue. The therapist introduces the empty chair technique, allowing participants to symbolically engage in conversations with significant figures in their lives. Through this exercise, they express unresolved feelings, gain perspective, and explore alternative emotional responses that promote self-compassion and empowerment.

Session 6: Enhancing Positive Emotions and Forgiveness

In this session, participants explore the role of forgiveness in emotional healing and personal well-being. They examine how self-criticism impacts physical and mental health, particularly in relation to stress and cardiac function. The therapist guides participants through exercises that facilitate forgiveness—both of themselves and others. Discussions emphasize the consequences of delaying forgiveness and the benefits of emotional release, leading to increased self-acceptance and emotional resilience.

Session 7: Aligning Personal Values with Emotional Well-Being

Participants reflect on their personal values and the ways emotions influence their ability to live in alignment with these values. They explore emotional and psychological needs and develop strategies for fulfilling them in meaningful ways. Discussions focus on integrating emotional awareness into daily life, emphasizing self-care, relational health, and goal-setting. The therapist encourages participants to connect their values with actions that promote long-term emotional well-being, such as maintaining health, setting boundaries, and fostering meaningful relationships.

Session 8: Reviewing Progress and Reinforcing Change

The final session consolidates the skills and insights gained throughout therapy. Participants review the emotional regulation strategies they have learned and reflect on the changes they have made in their interactions and self-perception. The therapist highlights key differences between past dysfunctional patterns and current adaptive responses. Participants share their progress, discuss any remaining challenges, and develop a plan for maintaining emotional growth beyond therapy. The session concludes with a summary of key takeaways and encouragement to continue applying EFT principles in daily life.

Data analysis

Data were analyzed using covariance analysis (ANCOVA) to assess the effectiveness of EFT on self-conscious affect, illness perception, and mental rumination. Before conducting ANCOVA, assumptions such as normality and homogeneity of variances were tested. Normality was checked using the Shapiro-Wilk test, and homogeneity of variances was verified through Levene's test. Both tests confirmed that the data met the necessary assumptions for ANCOVA. Additionally, effect sizes were calculated to determine the magnitude of the therapy's impact on the dependent variables.

Findings and Results

The mean and standard deviation of the subjects' ages were 36.33 (SD = 6.34) for the control group and 35.73 (SD = 6.41) for the experimental group. The findings of the covariance analysis are presented below. Before conducting the covariance analysis, the test assumptions were examined using Levene's test and the Kolmogorov-Smirnov test, which confirmed the suitability of using covariance analysis.

Table 1

Mean and Standard Deviation of Pre-test and Post-test Scores for Experimental and Control Groups

Variable	Group	Pre-test (M ± SD)	Post-test (M ± SD)
Self-conscious Affect	Experimental	105.86 ± 29.83	81.86 ± 21.40
	Control	104.73 ± 31.33	104.20 ± 25.59
Illness Perception	Experimental	70.33 ± 6.95	52.33 ± 3.30
	Control	70.13 ± 7.03	69.46 ± 6.45
Mental Rumination	Experimental	122.66 ± 10.58	152.00 ± 6.30
	Control	123.53 ± 10.91	122.53 ± 6.45

Based on Table 1, the mean and standard deviation of the experimental group's self-conscious affect, illness perception, and mental rumination changed compared to the control group in the post-test phase. Levene's test indicated that the error variances for the variables of self-conscious affect (F= 1.260, P= 0.271), illness perception (F= 0.531, P = 0.472), and rumination (F= 1.006, P = 0.324) were homogeneous (P> 0.05). Box's M test for homogeneity of variance-covariance matrices was not statistically significant (P= 0.068, F= 1.961, Box's M = 13.328), indicating that the assumption of homogeneity of covariance matrices was met. Wilks' Lambda results showed that after controlling for pre-test scores, there was a significant difference between the experimental and control groups in at least one of the variables (P < 0.05).

Table 2

Results of ANCOVA for Research Variables

Variable	Source	SS	df	MS	F	P	Eta Squared
Self-conscious Affect	Pre-test	12926.471	1	12926.471	131.225	0.001	0.829
	Group	4010.726	1	4010.726	40.716	0.001	0.601
	Error	2659.662	27	98.506			
Illness Perception	Pre-test	220.952	1	220.952	11.568	0.002	0.300
	Group	2119.770	1	2119.770	110.980	0.001	0.804
	Error	515.714	27	19.770			
Mental Rumination	Pre-test	1219.813	1	1219.813	29.252	0.001	0.520

Group	6670.402	1	6670.402	159.959	0.001	0.856
Error	1125.921	27	41.701			

According to Table 2, the results of the covariance analysis showed significant differences between the control and experimental groups in terms of self-conscious affect (P = 0.000, F = 40.716), illness perception (P = 0.000, F = 110.980), and rumination (P = 0.000, F = 159.959). In other words, emotion-focused therapy was effective in improving self-conscious affect, illness perception, and rumination in patients with breast cancer.

Discussion and Conclusion

The results of the present study indicate the effectiveness of emotion-focused therapy on self-conscious affect, illness perception, and mental rumination in patients with breast cancer. Our results are consistent with prior studies demonstrating the positive impact of EFT on emotional well-being among cancer patients. For example, Watson and Greenberg (2017) found that EFT significantly reduced emotional distress and enhanced coping mechanisms in breast cancer patients. Similarly, a study by (Almeida et al.) reported improvements in emotional regulation and a decrease in depressive symptoms following EFT interventions in individuals with chronic illnesses. These findings support the notion that EFT can effectively address emotional and psychological challenges faced by breast cancer patients.

In explaining the findings, the emotion-focused therapeutic approach improves mental health and well-being by addressing psychological factors such as self-conscious affect, emotions, and behavior. It refers to an individual's ability to cope with environmental challenges and demands, including appropriate emotional, cognitive, and behavioral responses, highlighting how patients with cancer manage the emotional and psychological impact of living with the disease. Emotion-focused therapy helps individuals understand and manage their emotions, which can enhance their emotional intelligence and strengthen their ability to cope with the challenges of living with diabetes. Individuals learn to handle environmental challenges and demands effectively and constructively by focusing on behaviors appropriate to the environment. This may include changes in dietary patterns, exercise activities, and social interactions. Patients learn how to handle various psychological situations, which may include managing stress, anxiety, and other negative emotions (Resurrección Mena et al.).

Emotion-focused therapy reduces anxiety sensitivity by controlling direct and vicarious conditioning experiences, decreasing the perception of uncontrollability and unpredictability of stressful events, and creating cognitive changes in the mind that subsequently transform interactive responses, emotional awareness, emotional expression, emotional regulation, nature change, and corrective emotional experiences (Hanetz Gamliel et al., 2018). This therapy focuses on helping individuals regulate their emotions rather than attempting to suppress or avoid them. It enables patients to cope with the emotional challenges of self-management, such as stress, frustration, guilt, and shame, thereby showing a positive relationship with emotion regulation, which improves symptoms in patients.

Emotion-focused therapy was effective in addressing feelings of shame and guilt in patients with breast cancer. The goal is to change maladaptive emotional schemas, which may include feelings of shame and guilt, by accessing and generating adaptive emotions within a supportive therapeutic relationship. Patients may experience feelings of guilt and shame related to their illness, potentially influenced by past behaviors. The anxiety and depression accompanying women with breast cancer highlight the potential to change problematic chronic emotional schemas resulting from cancer experiences. This therapy can facilitate the transformation of maladaptive emotions and improve cognitive emotion regulation, although the specific effectiveness and outcomes may vary.

Emotion-focused therapy significantly impacted illness perception in breast cancer patients. This therapy can positively affect how patients perceive their illness and manage their emotions (Hissa et al.). Emotion-focused therapy has been associated with post-traumatic growth and optimistic illness perception in cancer patients, indicating that how patients perceive their illness and regulate their emotions plays a crucial role in their psychological adaptation (Rahimzadegan et al.).

The practical applications of EFT in clinical settings are substantial. EFT can be integrated into routine psychological support for breast cancer patients to help them process and manage their emotions more effectively. By incorporating EFT into standard care protocols, healthcare providers can offer more comprehensive support, addressing both the physical and emotional needs of patients. Training clinicians in EFT techniques could enhance their ability to assist patients in navigating the emotional complexities associated with cancer diagnoses and treatment, ultimately improving overall patient outcomes.

While this study provides valuable insights, it is important to acknowledge its limitations. The use of a convenience sampling method may introduce selection bias, limiting the generalizability of the findings. Future research should aim to employ random sampling techniques to obtain a more representative sample. Additionally, the study's reliance on self-report measures could introduce response biases. Incorporating objective measures and longitudinal designs in future studies could help address these limitations and provide a more robust understanding of EFT's efficacy.

Future studies should explore the long-term effects of EFT on breast cancer patients, examining whether the observed benefits are sustained over time. Research could also investigate the impact of EFT on other psychological variables, such as anxiety, depression, and quality of life, across different types of cancer. Additionally, it would be beneficial to compare the effectiveness of EFT with other therapeutic interventions to determine the most effective approaches for supporting the emotional well-being of cancer patients.

The present study indicated that emotion-focused therapy could be appropriate for the psychological health of breast cancer patients by improving self-conscious affect, illness perception, and mental rumination.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this study.

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