

The efficacy of creative arts therapies to enhance emotional expression, spirituality, and psychological well-being of newly diagnosed Stage I and Stage II breast cancer patients: A preliminary study

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Abstract

Breast cancer is the second most common type of cancer among women in the United States. The psychological impact of the disease may include adjustment disorders, depression, and anxiety and may generate feelings of fear, anger, guilt, and emotional repression. The purpose of this pilot study was to explore the efficacy of a complementary creative arts therapy intervention to enhance emotional expression, spirituality, and psychological well-being in newly diagnosed breast cancer patients. Thirty-nine women with Stage I and Stage II breast cancer were randomly assigned to an experimental group who received individual creative arts therapy interventions or a control group of delayed treatment. A series of analyses of covariance were used to analyze the results, which indicated the intervention was not effective in enhancing the emotional approach coping style of emotional expression or level of spirituality of subjects in this sample. However, participation in the creative arts therapy intervention enhanced psychological well-being by decreasing negative emotional states and enhancing positive ones of experimental group subjects. Recommendations for future research are discussed.

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One of every eight women is at risk to receive a breast cancer diagnosis in her lifetime (American Cancer Society [ACS], 2001). Breast cancer is the second most common form of cancer, “accounting for nearly one of every three cancers diagnosed in American women,” with African-Americans more likely to die from the disease than Caucasians (ACS, 2001). A breast cancer diagnosis can have a profound impact on a woman’s life and the lives of her significant others. Women struggling with the disease “may worry about caring for their families, keeping their jobs, or continuing daily activities. Concerns about tests, treatments, hospital stays, and medical bills are also common” (National Cancer Institute, 2003).

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Researchers have documented the psychological impact of the disease; adjustment disorders, depression, and anxiety affect breast cancer patients' ability to deal with everyday life stressors, and may generate feelings of fear, anger, guilt, and emotional repression (Glanz & Lerman, 1992; Razavi & Stiefel, 1999; Tapper, 1999; van der Pompe, Antoni, Visser, & Garssen, 1996). Emotional repression has been linked to women with breast cancer (Greer & Watson, 1985; Lilja, Smith, Malmstrom, & Salford, 1998; Watson et al., 1991). Recent research found that recurring major depression predicted a higher incidence of breast cancer (Penninx et al., 1998).

In addition to emotional and psychological distress and adjustment, a breast cancer diagnosis puts women face-to-face with existential life-and-death issues that may elicit a need to address spirituality (Cole & Pargament, 1999; Moadel et al., 1999). The spiritual domain is thought to provide "important and unique information, with both clinical implications and explanatory power [and] this information is lost when the spiritual domain is overlooked" (Brady, Peterman, Fitchett, Mo, & Cella, 1999, p. 426). Research that explored the role of spirituality in cancer patients' experience of adjusting and coping with the disease, although increasing, remains limited.

The ACS (2001) has acknowledged the value of a holistic approach to treatment, including the exploration and inclusion of complementary, mind-body, and psychological therapies to the conventional treatment regimen, and has encouraged cancer patients to "learn how a good attitude and healthy spirit may have positive physical effects." Effectively treating depression symptoms in cancer patients "results in better patient adjustment, reduced symptoms, and may influence disease course" (Spiegel, 1996, p. 114). Creative arts therapies are one such complementary, mind-body intervention that may assist breast cancer patients in their struggle.

Physicians, nurses, and clinicians are beginning to recognize the role that creative arts play in the healing process; increasingly, Arts in Medicine[®] programs are emerging throughout the United States and worldwide (Ganim, 1999). This development has popularized the use of unstructured, artist-guided, creative and expressive arts opportunities for patients being treated for a variety of cancers and other life-threatening illnesses (e.g., see Ganim, 1999; Graham-Pole, 2000; Rockwood-Lane & Graham-Pole, 1994). This study aimed to provide similar, creative arts, therapeutic intervention within the context of outpatient counseling sessions for women diagnosed with early-stage breast cancer. The benefits of integrating creative arts therapy interventions in the treatment of adult clients have been well documented (e.g., see Gladding & Newsome, 2003). More specifically, Gladding and Newsome contend that "art serves as both a catalyst and conduit for understanding oneself in a larger world context, [doing so] through stirring up feelings and opening up possibilities" (Gladding & Newsome, 2003, p. 252). The creative arts therapy interventions used in this research study provided opportunities "through which individuals [may] express thoughts and feelings, communicate nonverbally, achieve insight, and experience the curative potential of the creative process" (Malchiodi, 2003, p. 117).

The semi-structured creative arts therapy interventions used in this study were carefully selected adaptations from texts providing creative and spiritual practice exercises designed for individuals seeking personal, emotional, and psychological healing while facing life struggles, including life-threatening illness (Crockett, 2000; Horovitz-Darby, 1994; Lesser, 1999). Counselors are in a unique position to contribute by assessing breast cancer patients' ability to express difficult, negative emotions (e.g., anger, depression, and anxiety), providing creative arts therapy interventions that may facilitate healthy emotional expression, and assisting women to cope with and adjust to the stressors associated with a breast cancer diagnosis and its treatment.

Although a limited number of qualitative studies have explored the efficacy of creative arts therapy on breast cancer patients' emotional expression (Aldridge, 1996; Predeger, 1996) and one mixed-methods study explored psychological adaptation (Dibbell-Hope, 2000), we found no experimental studies that examined the efficacy of creative arts therapy interventions on breast cancer patients' spirituality or the role of spirituality on their psychological well-being and/or adjustment to the disease.

Research and conceptual explorations about the efficacy of creative arts therapies and art therapy on patients with various types of cancer have included music therapy (Aldridge, 1998), structured and unstructured journal writing, including poetry and prose (Davis, 2000; Haegglund, 1976; Philip, 1995; Smith, 1995; Stanton et al., 2002; Wyatt-Brown, 1995), art appreciation (Greenstein & Breitbart, 2000), and multimodal art therapy (Dreifuss-Kattan, 1990). Research studies about the efficacy of creative arts therapies and art therapy on breast cancer patients have included music therapy (Aldridge, 1996), sculpting (Cruze, 1998), multimodal art therapy (Predeger, 1996), and dance therapy (Dibbell-Hope, 2000). No experimental studies were found that explored the efficacy of creative arts therapy or art therapy (individual or group) interventions on breast cancer patients' emotional expression, spirituality, and/or psychological well-being. This area of inquiry remains relatively unexplored. The present study investigated the

efficacy of creative arts therapy interventions on these constructs, utilizing, primarily, a quantitative research methodology.

This research study maintained a positive focus on breast cancer patients' personal strengths. As scholar practitioners, the clinicians attempted to help subjects access these strengths through creative arts therapy interventions that may facilitate emotional expression, spirituality, and psychological well-being. Greer (1999) specifically underscored the importance of "delineation, measurement, and psychophysiology of positive states of mind [that] have been sorely neglected [and represent] a promising area for future research" (p. 236). Thus, guided by a holistic approach to the treatment of breast cancer patients, the conceptual backdrop to this study was the newly emerging field of positive psychology (Seligman, 2002), in general, and Csikszentmihalyi's (1990a, 1990b, 1996, 1997, 2000a, 2000b) theory of flow, specifically.

Innovative treatment interventions are being proposed, developed, and researched that transcend the realm of traditional psychotherapeutic practices and address the role of spirituality in emotional and psychological healing (Katra & Targ, 2000). The use and application of creativity through creative arts therapy interventions is one such treatment option. Promoting creativity and the experience of flow through a creative arts therapy intervention may facilitate breast cancer patients' emotional expression and enhance self-reported levels of spirituality and psychological well-being. The purpose of this study was to determine the efficacy of complementary, mind-body creative arts therapy interventions in enhancing emotional expression, spirituality and psychological well-being in newly diagnosed Stage I and Stage II breast cancer patients.

We posed the following research questions: (1) Can creative arts therapy interventions help enhance newly diagnosed Stage I and Stage II breast cancer patients' emotional expression? (2) Can creative arts therapy interventions help enhance newly diagnosed Stage I and Stage II breast cancer patients' self-reported levels of spirituality? (3) Can creative arts therapy interventions help enhance newly diagnosed Stage I and Stage II breast cancer patients' levels of psychological well-being?

Methods

Participants

The sample of this preliminary study consisted of 39 women from a southern college city and the surrounding rural areas. Participants were referred to the study by their private physician, hospitals, or the American Cancer Society support network. In order to qualify for this study, the women had to be 18 years or older and have been diagnosed with Stage I or Stage II breast cancer within 12 months prior to entering the study. The majority of the women in this study were Caucasian with four African-American, four Hispanic-American, and one Native American woman participating. Thirty-six percent of the women completed high school and 51% had an associate's, bachelor's, or master's degree. The mean age was 51.4 with a standard deviation of 11.9. Descriptive data relevant to the participants' breast cancer reveals that 20 women had Stage I breast cancer and 19 women had Stage II. Random assignment resulted in 20 women in the treatment group (four individual creative arts therapy interventions over 4 weeks) and 19 women in the control group (delayed treatment for 4 weeks). The treatment protocols for the experimental group and for the control group of delayed treatment were the same.

Instruments

The experimental study involved a pretest/posttest control group design and included the random assignment of subjects to a treatment group or a control group. Prior to the intervention, the women completed a demographic questionnaire, informed consent, and the Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971). At the end of the 4 weeks, the participants in this study met with one of the study's counselors to complete three posttest measures, i.e., the Emotional Approach Coping Scale (EACS; Stanton, Kirk, Cameron, & Danoff-Burg, 2000), the Expressions of Spirituality Inventory—Revised (ESI-R; MacDonald, 2000), and the Profile of Mood States (McNair et al., 1971). The participants who were not able to attend the final and posttest session received a phone call requesting to complete the posttest measure and a packet in the mail containing a cover letter, written instructions, and an exit interview form. A self-addressed, stamped envelope was provided so the participants could return the completed questionnaires to the primary investigator.

Emotional Approach Coping Scale (EACS)

The Emotional Approach Coping Scale was used to assess emotional expression. The EACS was developed by Stanton, Kirk, et al. (2000) in order to assess emotional approach coping, a construct based on a functionalist theory of emotions (Campos, Mumme, Kermoian, & Campos, 1994; Levenson, 1994) as potentially adaptive for individuals in distress. Emotional approach coping involves the active processing “(i.e., active attempts to acknowledge and understand emotions)” and expression of emotions (Stanton, Kirk, et al., 2000, p. 1150). The EACS consists of 16 items measuring the constructs: emotional processing (eight items) and emotional expression (eight items). The EACS used 4-point response options (1 = I usually don't do this; 4 = I usually do this a lot). Internal consistencies are reported as follows: Cronbach's coefficient α for emotional processing, $r=0.72$ and for emotional expression, $r=0.82$. Test–retest reliabilities were emotional processing = 0.73 and emotional expression = 0.72. The scale has been used in several studies with breast cancer patients (Stanton & Danoff-Burg, 2002; Stanton, Danoff-Burg, et al., 2000). Stanton, Kirk, et al. (2000) suggested that the scales be interpreted separately whenever emotional approach coping is not the primary variable of interest. Although the authors embedded the original EACS into other multi-dimensional coping measures, in this study, only the Emotional Expression sub-scale was used to measure emotional expression.

Expressions of Spirituality Inventory—Revised (ESI-R)

The Expressions of Spirituality Inventory—Revised is a measure of spirituality derived from a two-stage factor analytic study of more than 70 measures of spirituality with about 1400 subjects (MacDonald, Kuentzen, & Friedman 1999). MacDonald et al. created the ESI-R “to provide a well-designed and validated measure of spirituality that incorporates existing psychometric conceptualizations into a coherent organizational framework on which to understand and research the various elements of the construct” (p. 157). The ESI-R consists of 32 items. Two items at the end were added to provide face and content validity. Respondents of the ESI use a 5-point Likert-type scale (0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, 4 = strongly agree) to rate agreement or disagreement with given statements. Spiritual dimensions resulting from the factor analysis were: (a) Cognitive Orientation towards Spirituality (COS); (b) Experiential/Phenomenological Dimension (EPD); (c) Existential Well-Being (EWB); (d) Paranormal Beliefs (PAR); and (e) Religiousness (REL). The ESI-R's α coefficients range from 0.85 for Existential Well-Being to 0.97 for cognitive orientation towards spirituality. MacDonald et al. (1999) reported that “corrected item-dimension total score correlations range from .40 to .80 for all items” (p. 158). MacDonald (2000) also reported evidence of factorial, discriminant, convergent, and criterion validity in the ESI-R.

Profile of Mood States (POMS)

The Profile of Mood States is a 65-item, five-response, Likert-type scale of adjective ratings that are factored into six mood scores: tension–anxiety, depression–dejection, anger–hostility, vigor–activity, fatigue–inertia, and confusion–bewilderment. Scores that form each of these scales can be combined to yield a total mood disturbance score. Reliability of the POMS ranges from .84 to .95, test–retest correlations range from .65 to .74 and face validity is reported as good (Eichman, 1978). Because of their documented use with the population of breast cancer patients (Carver et al., 1993; Classen, Koopman, Angell, & Spiegel, 1996; Dibbell-Hope, 2000; Goodwin et al., 2001; Hosaka, Sugiyama, Tokuda, & Okuyama, 2000; Spiegel et al., 1999; Stanton & Danoff-Burg, 2002; Stanton, Danoff-Burg, et al., 2000) and considerable psychometric properties (Eichman, 1978), the POMS sub-scales' scores were used as a measure of psychological well-being in this study.

Exit questionnaire

Information obtained in the exit interview questionnaire, developed by the researchers, was used as a means to determine clinical significance since targeted answers reflected each woman's subjective evaluation of the individual creative arts therapy interventions experience, including perceived emotional and psychological benefits resulting thereof. Clinical significance was evaluated by reviewing responses from all subjects who received the creative arts therapy interventions (including control group of delayed treatment) to a set of three questions in the exit interview questionnaires: (1) Did you think it was helpful to participate in this creative arts therapy experience? (2) Would you recommend this process to someone else with a health problem? (3) What was the most important thing that happened to you as a result of participating in the creative arts therapy exercises?

Creative art therapy interventions

The primary investigator of the study, in consultation with the research team, adapted the creative art therapy interventions, which were specifically designed to facilitate emotional expression, spirituality, and psychological well-being, from creative arts therapy and spirituality texts (Crockett, 2000; Horovitz-Darby, 1994; Lesser, 1999). The specific interventions were carefully reviewed by experts in the areas of applications of creativity and spirituality in counseling, counseling psychology, and measurement and evaluation. This pilot study provided a total of four individual therapy sessions over a 4-week period. Each session lasted approximately 60 min. The last session lasted approximately 90 min to allow for completion of posttest measures. The individual sessions consisted of guided, semi-structured, creative arts therapy exercises.

Although the individual creative arts therapy sessions were semi-structured, the counselors took care to attend to each woman's emotional and psychological needs at the time of the intervention(s). The women were encouraged to bring into each session whatever issue(s) of concern were salient that particular week. The semi-structured interventions were selected to provide a framework of emotional and psychological exploration and an opportunity for emotional expression and support. As previously stated, the guiding theoretical backdrop was positive psychology, a humanistic counseling practice that encourages uncovering and building upon clients' strengths rather than focus on psychopathology. Each woman brought a set of traits and characteristics that they drew from in the process of adjusting to and managing their breast cancer diagnosis or any other emergent concerns and was encouraged to explore her strengths and ways to engage these in the healing process, including managing difficult emotional states. The exploration of these themes was done both verbally and through the creative arts therapy exercises outlined herein.

Each individual counseling session involved the counselor engaging the subject in semi-structured creative art therapy experiences using pencils, pastels, and/or acrylic painting supplies and multipurpose drawing/painting tablets. Creative freedom was encouraged in order to facilitate and explore the woman's emotional expression, spirituality, and psychological well-being state. Similar to Kahn's work with adolescents (1999), the authors believe that the use of art in counseling newly diagnosed breast cancer patients may have "the cathartic effect of releasing physical and emotional energy" (p. 292) and of enhancing psychological well being.

More specifically, the individual creative art therapy exercises included exploration of the breast cancer experience, a guided meditation developed to assist the client increase body awareness and connection, a spiritual belief questionnaire intended to help with exploration of spiritual themes, including the role that a belief in a higher being (i.e., G-d, Jesus, Allah, Krishna, Buddha) plays in the experience of coping with life problems, including the breast cancer. The last session included a creative poetry writing exercise geared toward the exploration of life and death issues through words, imagery, and metaphor.

The questions guiding session one were aimed to elicit meaning making of the breast cancer experience. A breast cancer diagnosis can raise existential dilemmas that put women face-to-face with issues of life purpose, meaning, and death (Spiegel et al., 1999). Session two underscored the importance of a holistic approach to health and healing. It provided a guided exploration of body-emotion awareness and connection whereby each woman could experience sensations, feelings, degrees of comfort, and discomfort present within their bodies. The experience was geared toward a psycho-educational and subjective understanding of each woman's body-mind-emotions and spirit experiences and connections. The third session was a more structured series of questions aimed at eliciting awareness of spiritual development over the lifespan, uncovering places of congruence and incongruence, exploring specific beliefs and practices that may enhance or hinder spiritual groundings. The women also had an opportunity to visually represent their idea of a higher power and delineate the ways that this force has influenced their lives, if at all. Finally, the last session was conducted in a spirit of playfulness and through the use of creative written and verbal expression. Each woman was asked to answer a series of questions about themselves that encouraged the use of active imagination. They were then instructed to write two poems using the words from a list of answers. The themes were life and death and were meant to assist with the uncovering of personal meaning and beliefs about each. This session enhanced self-awareness pertaining to deeply held beliefs about the purpose of life itself and ideas around death and/or the dying process. All individual sessions were aimed to facilitate self-awareness, emotional exploration and expression, and the discovery of personal strengths and potential areas of growth.

Two licensed mental health counselors, with a total of over 20 years of professional counseling experience, provided the individual creative arts therapy interventions. Prior to conducting the study, both counselors carefully studied the

selected texts used to design the interventions and they delivered the creative arts therapy interventions according to specific guidelines outlined by each source (Crockett, 2000; Horovitz-Darby, 1994; Lesser, 1999). They also have engaged in extensive reading and continuing education training in the applications of creative arts therapy interventions and use of guided imagery in counseling. Additionally, in accordance with Kahn's (1999) recommendations, the counselors further prepared for the use of art in counseling by (1) personally experimenting with the creative process and the use of art materials through drawing, painting, and journal writing, and by completing guided imagery exercises; (2) consulting with other clinicians in the field who have used art in counseling or are certified art therapists; and (3) approaching the interventions as Kahn suggests:

The key to successfully employing art in counseling relies on understanding the goals of each stage of the counseling process and carefully selecting art directives that are consistent with the process and the needs of the [client]. As the structure and intensity of the directives change throughout the process, so does the counselor's processing of the art. Guiding questions can be, "What art activity will enable the [client] to move through this stage of the counseling process?" or "What needs to be expressed through art in this stage?" Throughout the sessions, the counselor will decide to what extent art activities will dominate the process. (p. 294)

The study's interventions focused specifically on the emotional processing of psychological struggles associated with a breast cancer diagnosis, not on the diagnostic, evaluative, or psycho-analytic component of art therapy. The latter represents a distinct discipline that requires specialized graduate training and certification. Finally, as licensed mental health counselors bound by the ethical code of the profession and informed by the work of Hammond and Gantt (1998), neither practiced beyond her current level of training or expertise.

Results

A series of analyses of covariance (ANCOVA) were used to examine the effects of the individual creative arts therapy interventions on emotional expression, as measured by the Emotional Approach Coping Scale-emotional expression subscale, spirituality, as measured by the Expressions of Spirituality Inventory—Revised, psychological well-being as measured by the Profile of Mood States while controlling the covariates (i.e., POMS pretest total or relevant subscales scores), and clinical significance as reported in the Exit Interview questionnaire. Pretest measurements of the POMS were used as the covariate in order to control for any differences between treatment and control groups at pretesting.

For emotional expression, as measured by the Emotional Approach Coping Scale, the covariate, pretest POMS total mood score made a significant adjustment ($p < .01$). However, the main effect (i.e., the experimental group of creative arts therapy interventions versus the control group of delayed treatment) did not reach statistical significance ($p > .05$). The spirituality dependent variable produced a similar pattern of results. Although the covariate, pretest POMS total mood score made a significant adjustment ($p < .01$), the main effect also did not reach statistical significance ($p > .05$) for the spirituality, as measured by the Expressions of Spirituality Inventory—Revised. These analyses with newly diagnosed Stage I and Stage II breast cancer patients showed that after statistical adjustment, the independent variable (creative arts therapy interventions) had a non-appreciable effect on clinical outcomes (i.e., emotional expression and spirituality).

The psychological well-being dependent variable produced a different pattern of results. The Profile of Mood Scale (POMS) scale was used to measure the dependent variable, psychological well-being, in this study. The subscales of the POMS include tension–anxiety, depression–dejection, anger–hostility, vigor–activity, fatigue–inertia, and confusion–bewilderment. Comparisons of the mean and standard deviation scores of the creative arts therapy interventions group and the control group for the POMS subscales are presented in Table 1. The results of the analysis indicate that there are statistically significant differences between treatment and control groups on tension–anxiety [$F(1, 36) = 5.41, p < .05, \eta^2 = .13$], depression–dejection [$F(1, 36) = 9.23, p < .05, \eta^2 = .20$], anger–hostility [$F(1, 36) = 7.31, p < .05, \eta^2 = .17$], and confusion–bewilderment [$F(1, 36) = 6.42, p < .05, \eta^2 = .15$], when controlling for the covariate, POMS total mood pretest scores. More specifically, participants in the treatment group had significantly lower scores than those in the control group on tension–anxiety, depression–dejection, anger–hostility, and confusion–bewilderment after completing the creative arts therapy interventions. For vigor–activity and fatigue–inertia subscales, there were no statistically significant differences between treatment and control group.

Table 1
Data analysis of Profile of Mood States Scores for creative art therapy and control group ($n = 39$)

Subscale	Treatment group ($n = 20$) mean (S.D.)	Control group ($n = 19$) mean (S.D.)	F	η_p^{2a}
Anger–hostility	15.79 (3.74)	19.10 (8.11)	7.31*	.17
Confusion–bewilderment	14.25 (3.34)	16.47 (4.74)	6.42*	.15
Depression–dejection	20.66 (4.74)	26.34 (8.48)	9.23*	.20
Fatigue–inertia	15.58 (5.22)	17.80 (8.74)	0.47	.00
Tension–anxiety	17.31 (5.01)	20.32 (6.78)	5.41*	.13
Vigor–activity	22.16 (5.92)	22.75 (5.24)	0.73	.00

^a Partial η^2 (effect size).

* $p < .05$.

Clinical significance

Results of clinical significance, obtained through the exit interview questionnaire, indicated that all women who received the creative art therapy experience found it helpful and would recommend it to others with a health problem. The women also reported that the most important happenings as a result of participating in the creative arts therapy interventions were: increased self-awareness, connected with feelings, discovered old issues that need attention, allowed time for self-care, reflection and quiet, helped connect with/express feelings, including ability to relax to communicate feelings through art, feel less hopeless, happier, and identified coping and stress management options, among others.

Finally, the participants in this study perceived benefits from participating in the creative arts therapy interventions. Reported benefits were congruent with some of the statistical findings in that the therapy was perceived to reduce negative affective aspects of psychological well-being by providing a forum where the women could connect with and communicate or express feelings. The perceived beneficial aspects may have resulted from the therapeutic stance inherent in individual psychotherapy practices rather than from particular theoretical and applied techniques utilized in this preliminary study. Results of the exit interview questionnaire are presented in Table 2.

Discussion

The results of the study concur with those that utilized group psychotherapy interventions (including supportive-expressive group therapy) on Stage I and Stage II breast cancer patients and reported decreases in tension–anxiety, depression–dejection, and anger–hostility scores post treatment (Antoni et al., 2001; Fawzy et al., 1990; Hosaka et al., 2000; Montazeri et al., 2000; Spiegel et al., 1999). Fawzy et al. (1990) also reported decreased levels of confusion–bewilderment and improved vigor–activity. The latter study's group intervention included a relaxation therapy and stress management component that may account for the improvements on vigor–activity. Mixed results have been reported for women with metastatic disease where some studies indicate psychosocial group interventions were successful in reducing psychological distress (i.e., enhancing psychological well-being; Goodwin et al., 2001; Spiegel, Bloom, Kraemer, & Gottheil, 1989; Spiegel, Bloom, & Yalom, 1981) while others were not (Edmonds, Lockwood, & Cunningham, 1999).

Several individuals who received the creative arts therapy interventions in this study reported feeling surprised at their ability to enhance their sense of well-being and to reframe the breast cancer experience and see it as an opportunity for personal transformation and growth. These experiences are consistent with Cruze (1998), a physician and breast cancer survivor, who experienced a decrease in hopelessness, an increased sense of happiness and optimism, and an ability to reframe the cancer experience after completing a creative arts (sculpture) experience.

Cancer patients frequently report symptoms of fatigue, sleep disturbance, nausea, diminished concentration, and pain, due, in part, to the physically taxing treatment regimens of radiation and/or chemotherapy (Jacobson & Verret, 2001). The creative arts therapy interventions used in this study, an affective and cognitive exercise, did not increase the subjects' vigor–activity aspect, unlike guided imagery and relaxation therapy interventions developed to potentially help increase the psychological well-being aspect of vigor–activity. Also, some individuals in this study experienced side effects from their oncology regimens and the creative arts therapy interventions did not help decrease the subjects' scores of the fatigue–inertia subscale of psychological well-being. Dibbell-Hope (2000), however, reported that the dance

Table 2

Clinical significance: summary of outcomes ($n = 33$; 20 treatment group and 13 control group delayed treatment participants)

Exit interview questions	Total, $n = 33$ (%)
Was creative art therapy helpful?	
Yes	33 (100%)
No	0 (0%)
Would recommend creative art therapy?	
Yes	33 (100%)
No	0 (0%)
Most important thing happening ^a	
Increased awareness of self/behaviors	7 (21%)
Helped connect with/express feelings	6 (18%)
Discovered old issues that need attention	6 (18%)
Allowed time for self-care reflection and quiet	5 (15%)
Relaxed to communicate feelings through art	5 (15%)
Feel less hopeless/happier	4 (12%)
Identified coping and stress management options	3 (9%)
Realized importance of individual counseling	3 (9%)
Creative art therapy powerful and healing	2 (6%)
Saw importance of living in present moment	1 (3%)
Feelings validated	1 (3%)
Experienced relief/relaxation	1 (3%)
Expressed inner thoughts	1 (3%)
Increased creativity	1 (3%)
Realized process more important than product	1 (3%)
Changed perspective on breast cancer	1 (3%)
With faith and good will all things are possible	1 (3%)
Realized that God is a major part of my life	1 (3%)

^a Multiple responses.

therapy intervention named Authentic Movement increased scores on the vigor–activity subscale of psychological well-being and decreased scores on the fatigue–inertia subscale after treatment and hypothesized that Authentic Movement might have contributed to a sense of physical well-being (i.e., improved vigor–activity and decreased fatigue–inertia) in the women.

Results of this study seem to indicate that the creative arts therapy interventions were beneficial to breast cancer patients in this sample in enhancing psychological well-being by decreasing negatively correlated subscales, including tension–anxiety, depression–dejection, anger–hostility, and confusion–bewilderment.

Limitations

Although this experimental study had a pretest/posttest, control group design with random assignment, exposure to the POMS at pretest may represent “a possible interaction between the pretest and the treatment which may make the results generalizable only to other pretested groups” (Gay, 1996, p. 366).

Maturation would be a limitation in this study, even though a pretest/posttest, control group design with random assignment helps to control for this threat. Several individuals in this study reported critical events during the creative arts therapy interventions experience that may have influenced treatment outcomes; including two significant outliers that were eliminated from the dataset. These events included, among others, financial problems, homelessness, a breast cancer diagnosis of one subject’s mother and another subject’s daughter, hospitalization due to severe side effects of chemotherapy, unexpected deaths in the family, and marital discord.

Self-selection is another limitation in this study. The women who participated in this study volunteered to become involved in a creative arts therapy intervention. There may be other psychological or emotional characteristics that may account for their self-selection, participation, completion, and outcomes of the study. This excluded the information about what the characteristics of women who chose not to participate are.

Since all instruments used in this study were self-report, the women may have made unconscious or conscious efforts to appear doing and feeling better than they actually were at pre- and post-session testing for all who received the treatment and/or at posttest after 4 weeks of treatment or wait (delayed treatment) time.

Another limitation of this study is the number of sessions delivered. Participants received a total of four therapy sessions. We hypothesize that a longer treatment regimen may have yielded different results (e.g., measurable effect).

Finally, the adapted creative arts therapy interventions did not represent art therapy interventions aimed to be delivered by certified art therapists. This study raises the question of whether significant results may have been obtained through the use and application of expressive arts therapy or art therapy interventions developed and delivered by certified expressive therapists or art therapists.

Recommendations for future studies

Some of women in this study reported taking a very proactive approach to their treatment and opting to receive alternative and complementary therapies as adjunctive to their oncology regimen. It is plausible that exposure to these treatments may account for some of the improvements in the psychological well-being subscales in this sample of breast cancer patients. Future research should take care to control for these factors in order to minimize this confound.

The present study may be greatly improved by including a larger number of creative art therapy interventions and by administering additional, delayed posttests, given sometime after treatment conclusion. The latter is an ideal follow-up to help assess sustained gains over time and to minimize the interaction of time of measurement and treatment effect(s), a threat to external validity (Gay, 1996). A future research study with a larger sample should include longitudinal follow-up to secure additional data and enhance our understanding breast cancer patients' long-term response to complementary therapy treatment options. Additionally, research needs to be conducted on the application of creative arts therapy interventions delivered by certified art therapists versus trained mental health counselors. Differential outcomes on this area of inquiry have yet to be explored.

Finally, during the exit interviews, many participants expressed a desire for future treatment and research participation options to be inclusive of significant others, a little-studied and attended-to population greatly affected by the breast cancer diagnosis of their loved ones.

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