**ORIGINAL RESEARCH** 

# BENEFICIAL EFFECT OF MINDFULNESS-BASED ART THERAPY IN PATIENTS WITH BREAST CANCER-A RANDOMIZED CONTROLLED TRIAL



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**Background:** Mindfulness-based art therapy (MBAT) induces emotional relaxation in cancer patients and is a treatment known to improve psychological stability. The objective of this research was to evaluate the treatment effects of MBAT for breast cancer patients.

**Methods:** Overall, 24 breast cancer patients were selected as subjects of the study. Two groups, the MBAT group and control group with 12 patients each, were randomly assigned. The patients in the MBAT group were given 12 sessions of treatments. To measure depression and anxiety, low scales of the personality assessment inventory (PAI) was used. Health-related quality of life was evaluated using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTCQLQ-C30). The treatment results were analyzed using analysis of covariance (ANCOVA) and two-way repeated measures analysis of variance (ANOVA).

**Results:** The results showed that depression and anxiety decreased significantly and health-related quality of life improved significantly in the MBAT group. In the control group, however, there was no significant change.

**Conclusions:** MBAT can be seen as an effective treatment method that improves breast cancer patients' psychological stability and quality of life. Evaluation of treatment effects using program development and large-scale research for future clinical application is needed.

Key words: breast cancer, mindfulness-based art therapy, depression, anxiety, quality of life

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#### INTRODUCTION

Receiving a diagnosis for breast cancer is a painful experience. Suffering from this type of illness is a great burden on treatment for the patient. Furthermore, when women are diagnosed with breast cancer, they experience severe emotional breakdowns.<sup>1</sup> Even after treatment for breast cancer is over, survivors continuously report severe psychological stress, anxiety, depression, fear of recurrence, physical pain, fatigue, inability to sleep, and damage to their quality of life.<sup>2</sup> Despite the seriousness of this illness, there is little research related to medical intervention after the treatment of breast cancer ends. Most research focused on alleviating pain and improving the patient's physical and psychological functions during breast cancer treatment.<sup>3</sup> Thus, patients tend to rely on complementary and alternative therapy. According to

# Corresponding author. e-mail: psysangyeol@hanmail.net Lengacher et al.,<sup>4</sup> 64–86% of breast cancer patients use complementary and alternative therapy to relieve their psychological pain.

Depression is the most widely researched of psychological disorders related to breast cancer. It is known that depression in breast cancer patients greatly influence their survival rate after treatment.<sup>5,6</sup> Depression in breast cancer patients is a behavioral side effect to receiving a diagnosis of the illness and treatment. Menopausal symptoms caused by treatment and the decrease in hormones are especially linked to depression.<sup>7</sup> Women with breast cancer are likely to experience depression within the first year after receiving diagnosis and continue to experience it during surgery, chemotherapy, and radiation treatment, and even after the treatment ends.<sup>8</sup> Fann et al.<sup>7</sup> have stated that breast cancer patients experience depression due to primary treatment and psychological and societal factors. Their theory states that this causes them to experience deterioration in their physical and cognitive function, and eventually, loss in quality of life. However, there is still no clear mechanism or effective nonpharmacological intervention for the depression faced by breast cancer patients.

Anxiety coexists with the depression faced by breast cancer patients,<sup>9</sup> and it is suggested that anxiety level is very high

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right after surgery. However, a study on a breast cancer cohort showed that the occurrence rate of depression and anxiety is 33% during diagnosis phase, 15% during the first year, and 45% after recurrence. Anxiety has been shown to lead to decline in a patient's quality of life.<sup>10</sup>

Quality of life is a subjective evaluation and satisfaction of the overall experiences in life and it is solely based on the individual. It is a state of physical, emotional, societal, and functional well-being.<sup>11</sup> Illnesses such as cancer induce great health-related risks; thus, studies on subjective quality of life during cancer mainly focused on health-related quality of life. Health-related quality of life is an evaluation on functional statuses that are influenced by health levels or the degree of illness.<sup>12</sup> The main factors that greatly influence the quality of life of breast cancer patients are social-psychological factors such as stressful life events, fatigue, and depression, which are physical and psychological factors.<sup>13</sup> The stress experienced after surgery during the treatment process is a significant predictor of quality of life. Women with higher levels of stress while receiving adjuvant therapy for cancer had a lower quality of life psychologically.<sup>14</sup> Fatigue was the most common complaint made by breast cancer patients-fatigue increased during adjuvant therapy and decreased with time. As fatigue increased, quality of life decreased.<sup>15</sup> Similarly, depression was related to breast cancer patients' quality of life -as the degree of depression increased, the quality of life decreased.<sup>16</sup>

Mindfulness-based art therapy (MBAT) is based on Kabat-Zinn's<sup>17</sup> mindfulness meditation and reflects on mindfulnessbased stress reduction (MBSR), Monti et al.'s<sup>18</sup> mindfulnessbased art therapy (MBAT) and the self-regulation theory.<sup>19</sup> The critical element in this theory is to equip patients with the ability to cope that can mature the ego harmoniously by subjectively and objectively expressing the physical and psychological pain they face.

This research aimed to understand the treatment effects of MBAT on breast cancer patients' depression, anxiety, and quality of life.

## **METHODS**

#### Design

To evaluate the effects of MBAT for 12 weeks on breast cancer patients, a randomized controlled trial (RCT) was conducted. This research was conducted from March to August 2014 and received approval from the clinical ethics committee of Wonkwang University Hospital.

#### Subjects

Flowchart of trial identification, selection and exclusion are displayed in Figure 1. The study subjects were 24 women over age 50 with stage 0, I, II, or III breast cancer. The subjects had received diagnosis for breast cancer and surgery at Wonkwang University Hospital. They then underwent radiation treatment or chemotherapy. All the patients had completed surgery, chemotherapy, or radiation treatment less than two years before. Patients were excluded if (1) they were in stage IV of breast cancer; (2) they were unable to consent to the research due to damage to their intellectual capacity; or (3) they had experienced drug abuse, had suicidal thoughts, or mental symptoms. The objective of the research was explained to the patients. After patients gave consent, they were randomly assigned into the MBAT group or control group at a 1:1 ratio.

#### **Treatment and Therapists**

Subjects in the MBAT group received 12 sessions lasting 45 min each. Korean mindfulness-based stress reduction's (K-MBSR) psychological intervention was applied to mindfulness activities. Monti et al.'s 8-week MBAT program based on MBSR was re-structured with a focus on its progress-bysessions idea.<sup>18</sup> The therapist encouraged the patients to express their inner pain or feelings sufficiently. The treatment process is displayed in Table 2. The therapist obtained qualifications from Wonkwang University in 2010 and acquired a doctorate in expressive arts therapy with more than 10 years' experience in the field. The therapist is a specialist in mental health medicine. A senior researcher who is a mindfulness meditation-based group art therapy instructor provided clinical supervision.

### Usual care Regimen

During our study, all the subjects in both the groups continued to have standard post-treatment clinic care that is directly related with their breast cancer. However, we asked the subjects in the waitlisted control group not to receive or practice therapies such as meditation, yoga techniques, or interventions similar to MBAT in order to avoid potential contamination as a no treatment group. After the completion of this study, the subjects in the waitlisted control group received the same MBAT intervention as the experimental one.

#### Measures

Patients used a self-report type evaluation method and evaluated themselves before and after treatment.

**Personality assessment inventory.** PAI is a self-reporting survey comprising 344 questions evaluated using a 4-point Likert scale.<sup>20</sup> It has high internal consistency and test-related reliability.<sup>21</sup> For this study, questions in the PAI related to depression and anxiety were extracted.

*European Organization for Research and Treatment of Cancer Quality of Life Questionnaire.* The EORTC-QLQ-C30 survey summarizes the overall feeling of health of the cancer patient and evaluates physical, emotional, and social functions.<sup>22</sup> This survey includes 30 items that evaluate functional evaluation, effects of symptom on quality of life, effects of illness on economic situation, and overall quality of life and health condition.<sup>23</sup>

#### **Statistical Analyses**

According to intent to treat (ITT) principle, the data for all the subjects were analyzed. Both Student *t*-test and Chisquare test were used for the analysis of demographic variables. Analysis of covariance (ANCOVA) was used to test the efficacy of MBAT on depression and anxiety between two Download English Version:

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