

# *Review and Prospect of Mindfulness-based Art Therapy in Reducing Symptoms of Depression in Cancer Patients*

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## ABSTRACT

Depression in cancer patients tends to be overlooked and can worsen their condition. One of the Mindfulness-based interventions to treat depression in cancer patients is mindfulness-based art therapy (MBAT). MBAT combines an art therapy approach with mindfulness that aims to provide individuals the opportunity to reconnect their thoughts and feelings through art activities. The effectiveness of mindfulness-based art therapy on depression is not yet clear compared to other more developed mindfulness-based approaches. In this study, researchers aimed to review journal articles regarding the effectiveness of art therapy-based mindfulness interventions in reducing depressive symptoms in cancer patients that had been previously studied. Furthermore, the effectiveness of the intervention based on the applied intervention procedure is also reviewed in this article. It is found that the Mindfulness-based art therapy intervention is effective in reducing depressive symptoms in cancer patients with 8-12 weeks' treatment with a duration of 45-150 minutes/session and given by a certified or trained therapist.

**Keywords:** *Mindfulness-based art therapy, Depression, Cancer Patients, Intervention.*

## 1. INTRODUCTION

Depression is a condition characterized by frequently feeling sad, disappointed, lost, and failed after experiencing a change in life. It becomes pathological when people are inadequate to adapt [1]. Depression in cancer patients may aggravate their health conditions such as health-related quality of life, treatment adherence, treatment effectiveness, poorer prognosis, and increased treatment costs [2]. Depression may also elevate the risk of death in cancer patients. The research found that the mortality rate for cancer patients is higher in cancer patients with symptoms of depression [3]. The risk of death also increased by 17% in patients with depression [4]. In addition, suicide rates have increased in cancer patients with a history of depression about 39.72 per 100,000 people/year, and the highest incidence occurring in Asia [5]. Based on the previous study, it can

be concluded that depression may also enhance the risk of death and suicide in cancer patients.

Despite depression being dangerous for patients' health conditions, the treatment of depression often being ignored. The cause may relate to its symptoms, and medical treatment follows the symptoms of depression such as fatigue, loss of appetite, and sleep disturbances [6]. Therefore, treating depression in cancer patients is very important. The research found it may improve not only the quality of life and better prognosis of patients but also their survival [3]. In addition to pharmacological interventions, psychological interventions are found to be effective in treating depression in cancer patients. Previous meta-analyses have found several psychological interventions that can be given to treat depression in cancer patients, such as mindfulness-based therapy to reduce depressive symptoms and increase

mindfulness skills and art therapy that effectively improves coping strategies that are more adaptive in cancer patients [7,8]. However, up to date, no meta-analysis has been found that specifically examines the effectiveness of interventions combining both mindfulness and art therapy approaches in reducing depressive symptoms in cancer patients.

Mindfulness-based art therapy is one of the psychological interventions included in the third wave of behavioral intervention-based mindfulness. According to McNiff, mindfulness-based art therapy combines several activities such as art, therapeutic relationship, and mindfulness practice that lead a person to have a different experience in a safe condition; also, the therapy will develop an explorative feeling between therapist and client consciously. Mindfulness in the context of therapy can be viewed as an elaborative approach which reliable in the current situation where every thought, feeling, or sensation appears inside consciousness in every person [9]. The center of consciousness in the present time is one of the ways to give attention in mindfulness practice and this approach can be nurtured and integrated into every individual activity.

In the mindfulness approach, depression may be prompted by a plausible low ability to mindfulness, causing a lack of clarity on the emotions felt, low self-control and acceptance, and easy involvement in dysfunctional emotional reactions (impulsivity and aggressive behavior towards others or self-blame). It may lead to high levels of psychological distress [10]. In mindfulness-based interventions, therapists prompt individuals to establish a neutral, exploratory, and open state of mind to release negative thoughts, considering feelings to prevent the continued escalation of negative feelings and the risk of recurrent depression [11]. Through mindfulness interventions, individuals learn how to increase their cognitive flexibility to adaptive emotion regulation strategies, reduce the habit of reactive responses to negative emotions, and provide an effective

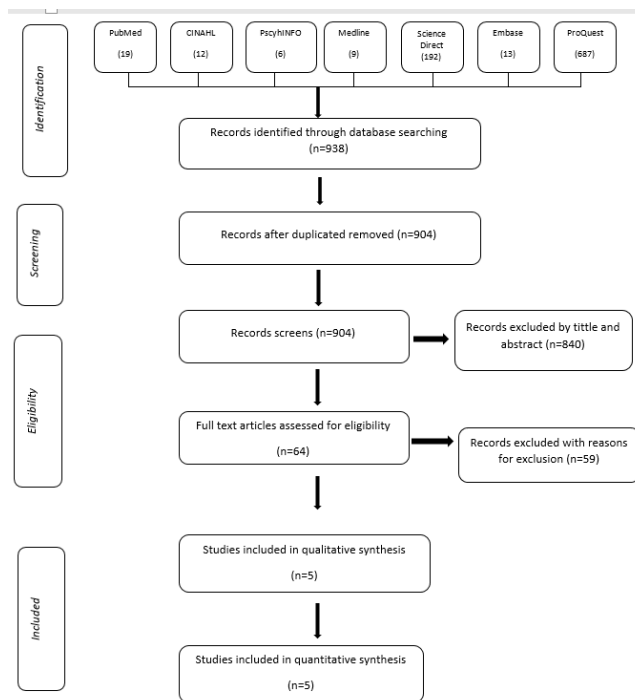
and adaptive response to psychological distress lead to decreased mental health distress [12].

On the other hand, the art therapy approach perceives depression as the outcome of repression and individual inability to express and regulate their negative emotions adaptively. Therefore, art therapy intervention in dealing with depression aims to facilitate non-verbal communication of the thoughts and feelings of depressed individuals who suppress their feelings. Art activities have an outcome on physical health and the quality of life biologically and instinctively. In individuals with depression, art activities can bring back individual to life events, and for some individuals, it can be a meaningful experience [13]. In other words, combining mindfulness and art therapy to treat depression in cancer patients may increase the flexibility of individuals in regulating their emotions more adaptively and facilitating non-verbal communication to find insight and regain control of their lives.

Unfortunately, compared to other approaches in mindfulness intervention, the study effectiveness of the MBAT in reducing symptoms of depression is still limited. This paper attempts to summarize the results of MBAT in reducing symptoms of depression in cancer patients and proposes prospects for future related research.

As of September 21, 2019, there are 938 articles published in English with ((Cancer OR Cancer Patients) AND (Mindfulness-based Art Therapy OR MBAT)) as research keywords from several electronic literature databases, namely: Medline, Pubmed, CINAHL, Embase Proquest, Science direct and PsychINFO. We selected papers based on the following criteria: (1) the study was published in English; (2) the study involved a mindfulness-based art therapy and depression in cancer patients; (3) exclusion of relevant research and research without data (including research papers not published and incomplete data in conference proceedings or outcome of depression).

Picture 1. PRISMA FLOWCHART



## 2. RESULT

### 2.1 Study characteristic

The characteristics of the studies found to have research designs in the form of Random Controlled Trial (RCT) as many as 3 studies, and non-Randomized Controlled Trial (Non-RCT) as many as 2 studies where 1 of the 2 studies is a pilot study. In addition, studies on the effectiveness of MBAT on depression in cancer patients were first found to be conducted in America in 2006 to 2018 with a total of 3 studies, while in Asia two studies began to expand a decade later in which conducted in Japan and South Korea in the range of 2016-2018.

### 2.2 Participant Characteristic

Although the results of this search are limited to the 2000-2020 publication year, the study's final results included in the qualitative analysis of this synthesis were found to be 5 published articles in the 2006-2018 range. From the 5 studies, 335 participants were obtained with a total dropout of 64 people. The dropout participants were

participants in studies that included patients with metastatic cancer. The number of study samples ranged from 10-191 people. The age of the participants was found with an average age between 51.58 - 56.8 years, with the majority of participants being female with heterogeneous types of cancer. The types of cancer of the included participants were also found to vary, including 1 study has participants with metastatic cancer type [14], 1 study [15] including non-metastatic participants, while 3 other studies [16,17,18] included heterogeneous participants with metastatic and non-metastatic cancer types.

### 2.3 Intervention Characteristic

Based on the five studies, it was found that the majority of interventions used were Standard MBAT (3 studies) and modified MBAT (2 studies). The intervention duration ranges from 2-12 weeks with a duration of 45-150 minutes/session. Only 2 studies were found to have a follow-up at 16 and 36 weeks after the last intervention. Furthermore, it was found that professionals provided the majority of interventions with diverse backgrounds, such as registered arts therapists (3 studies), mental health therapists (1 study), and church counselors and social workers (1 study).

Table 1. Result of Studies

Study	Intervention Type	Control	Number of Sessions	Duration (Min/Session)	Therapist
Monti et al. (2006)	MBAT	Waitlist	8 Weeks	120-150	Registered Art Therapist
Monti et al. (2013)	MBAT	BCSG	8 Weeks	120-150	Registered Art Therapist
Ando et al. (2016)	MBAT Short Version	NA	2 Weeks	60	Counselor dan Pastoral Care Worker
Jang et al. (2016)	MBAT	Waitlist	12 Weeks	45	Mental health therapist
Meghani et al. (2018)	MBAT Walkout About	NA	8 Weeks	150	Certified Art therapist

## 2.4 Type of Outcome Measures

From the studies, we found various measuring tools used to measure the outcome of depression in the participants studied. It is known that 2 studies [17,18] used the same measuring instrument, the SCL-90R (The Symptom Checklist-Revised). The SCL-90R measuring instrument has been proven to have high reliability, equal to ( $\alpha = 0.90$ ). As for the other 3 studies, each using a different measuring instrument, namely Ando et al. [14] using the Japanese shortened version of the POMS (Profile of Mood States) measuring instrument with high reliability ( $\alpha = 0.89$ ), Jang et al. [15] used the PAI (Personality Assessment Inventory) measuring instrument with fairly high reliability ( $\alpha = 0.80$ ), while Meghani et al. [16] used the ESAS-R (The Edmonton Symptom Assessment Scale-R) measuring instrument with high reliability ( $\alpha = 0.89$ ).

## 3. THE EFFECT OF MINDFULNESS-BASED ART THERAPY IN REDUCING SYMPTOMS OF DEPRESSION IN CANCER PATIENTS

### 3.1 Analysis of the Effectiveness of Intervention

Overall, most of the published experimental studies of mindfulness-based art therapy intervention in cancer patients show that mindfulness-based art therapy can effectively reduce symptoms of depression. Using a random effect approach of meta-analysis, it is found that there was a moderate and significant effect size on the MBAT intervention compared to control group ( $g = -0.74$ ,  $SE = 0.3$ ; 95% CI = -1.31, -0.17,  $p < 0.05$ ,  $k = 5$ ,  $I^2 = 83.14$ ). However, the distribution of effects was found to be quite wide (-1.31 to -0.17).

On the other hand, two studies included in this review have shown that the effect of mindfulness-based art intervention is not quite significant compared to other interventions. As shown by Ando et al. [14] that the MBAT intervention to have a small and less significant effect size ( $g = -0.36$ ;  $p > 0.05$ ;  $SE = 0.4$ ). Furthermore, a study by Monti et al. [18] shows the MBAT intervention

was not more effective compared to other interventions in reducing the symptom of depression in cancer patients ( $g = -0.04$ ;  $p > 0.05$ ,  $SE = 0.14$ ).

### 3.2 Intervention Effect is Affected by Internal and External Factors

Although, in general, mindfulness-based art therapy has a moderate effect on reducing depression symptoms in cancer patients, which types of cancer patients benefit and how effective the interventions are cannot be determined at this point. This review suggests that the effect of mindfulness-based art intervention is susceptible to internal factors such as type of cancer. A study by Jang et al. was found that recruiting only non-metastatic cancer patients has the highest effect of intervention compared to other studies that include metastatic cancer patients. The patient type of cancer may affect the severity of symptoms of depression and adherence to therapy. Metastatic cancer and its treatment affect patients' quality of life, such as the burden of physical symptoms, emotional stress, impaired body image, and disturbances to the functioning of daily activities [19].

According to research, patients with non-metastatic cancer have a survival rate of up to 15 years with a percentage of 78% [20], whereas patients with metastatic cancer have a shorter 5-year survival by 5-19% [21]. Based on this review, it is found that there is a higher participant dropout rate in studies that included patients with metastatic cancer compared to the studies with non-metastatic cancer patients. More participants drop out with metastatic cancer can be caused by physical and psychological conditions of comorbidities. This result is in line with Wells et al who found the reasons for dropout in cancer patients receiving psychological intervention in overcoming their depression includes the severity of cancer that affects the patient's physical and emotional condition, dissatisfaction with depression treatment, financial issues, the presence or absence of a caregiver, and health system problems [22].

In addition, this review also found that the effectiveness of mindfulness-based art intervention in reducing depression symptoms might be influenced by external factors (form and length of therapy). The effect size of the 5 studies included in this review differed in the form and length of intervention, with 3 studies using the original form of MBAT and 2 studies using modified MBAT. The length of intervention also found a minimum of 2 weeks and a maximum of 12 weeks. However, this research results suggest that the intervention effect is significant when it is given in 8- 12 weeks of intervention with the most effective form is MBAT intervention carried out by Jang et al. [15] for 12-week intervention, which has the most significant effect size compared to other studies.

#### **4. LIMITATIONS AND PROSPECTS FOR THE RESEARCH**

From the review of the effect size included studies, it can be seen that the largest effect size is found in the research conducted by Jang et al. [15] compared to other studies that recruited more participants. The different magnitude of the effect size in the research might indicate the potential moderator on effect size. According to Schäfer and Schwarz [23], even though a larger sample tends to give a smaller effect size, it is possible to give enough statistical power to become significant regardless of its magnitude of effect size.

Moreover, the form of intervention might also have a potential moderating effect. According to Gilbert [13], individuals with depression have difficulty finding meaning and establishing social relationships. In the MBAT intervention, a group therapy can facilitate a supportive environment in which individuals with depression can develop feelings of belonging to a group through social interactions built with other participants. Therefore, the researcher recommends that future studies may analyze the effectiveness of MBAT on the social functioning of cancer patients with depression.

#### **5. CONCLUSION**

In summary, there is evidence that mindfulness-based art therapy for the intervention of symptoms of depression in cancer patients can be effective when given by professional art therapist/mental health therapist for 8-12 weeks' intervention. However, some shortcomings in this current research are the number of research, and the method of research, such as the method of data sampling and the measurement tool used in those studies are not specifically for depression.

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