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ART THERAPY AS AN INTERVENTION AND ITS EFFECTS ON ANXIETY AND DEPRESSION

Macy E. Whitenburg
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ABSTRACT

There is a prevalence in the United States, as well as other countries, of individuals of all age ranges suffering from negative mental health issues, including anxiety and depression. Previous studies have shown that using art therapy as an intervention could help improve both anxiety and depression outcomes. This research examines different art therapy techniques, as well as combined interventions, and how different approaches can help improve anxiety and depression scores based on the self-reported Spielberger's State-Trait Anxiety Inventory (STAI), the Beck Depression Inventory (BDI) tests, and a variety of other self-report assessment tests.

INTRODUCTION

Art Therapy as an Intervention and its Effects on Anxiety and Depression

Across cultures, art has served as a universal language. In the United States, art is a form of self-expression that many have been exposed to either in grade school, secondary-level education, or within their private range of extracurricular activities. Art is created in many forms, including painting, drawing, woodshop, engineering, construction, and virtual media. Many individuals use art as an emotional release from everyday stress, and as an expression of their anxiety and depression. Research by Rahmani et al. (2016), de Moraes et al. (2014), Nan & Ho (2017), and Kim et al. (2014) indicates that art therapy has improved mental health conditions pertaining to anxiety and depression scores, based on self-report scales.

Art therapy can be defined as a type of psychotherapy that utilizes art media as its primary mode of communication between the conscious

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and subconscious self. It offers an opportunity for individuals to communicate their thoughts and feelings in a non-harmful way, and it often serves as a means of expression for those who struggle to express themselves verbally (Case & Dalley, 2014). In art therapy, both the therapist and client work together to understand the meaning of the artwork produced by the client (Case & Dalley, 2014). In this manner, the interaction between therapist and client is purely personal, and helps the client gain a better understanding of their feelings.

LITERATURE REVIEW

I. Prevalence Statistics and Definitions of Anxiety and Depression

Anxiety statistics and diagnostics. The prevalence of generalized anxiety disorder (GAD) is about 3.1% of the general population in the United States (Stein & Sareen, 2015). Wittchen et al. (2011) state that GAD is the most common anxiety disorder seen in primary care (as cited in Kujanpää et al., 2016). GAD, as defined by Price and von Stolk-Cooke (2015), is a condition characterized by irritability, restlessness, feeling on-edge, with difficulty concentrating, increased startle, and difficulty sleeping. Additional requirements for an individual to be classified as having GAD, according to the *Diagnostic and Statistical Manual of Medical Disorders* (DSM-5), include “six months... minimum duration of anxiety for diagnosis, and most patients have had the disorder for years before seeking treatment” (as cited in Stein & Sareen, 2015, p. 2059). These statistics outline not only the prevalence of GAD, but the possible severity and toll it can take on an individual. Individuals may choose not to seek treatment for a variety of reasons, some including the overall cost of treatment and the added anxiety about taking prescription medications. When used as an intervention, art therapy does not involve the use of prescription medications, however, most psychiatrists suggest the combination of both therapy and medication for a better and more effective treatment. In the end, it is up to the individual suffering from GAD to choose whichever treatment plan they wish to pursue.

Depression Statistics and Definitions. Depression is one of the world’s major epidemics, as Wittchen et al. (2011) have argued. Rush et al. (2006) emphasized that depression has a significant impact on an individual, producing severe symptoms that can alter the way individuals think, feel, and perceive themselves and others (as cited in Blomdahl et

al., 2018). Dere-Meyer et al. (2011) stated that “depression might have a variety of consequences such as unhappy temper, reduced concentration or desire in most actions, being too thin or overweight, insomnia or hypersomnia, anxiety, exhaustion, feelings of worthlessness, and even thoughts of death or suicide” (as cited in Rahmani et al., 2016, p. 78). Rush et al. (2006) also argued that “less than 50% of all individuals with depression recover. ...The causes are still unknown, but a credible explanation could be that people have varying needs in terms of treatment” (as cited in Blomdahl et al., 2018, p. 170). Rush identified the possible correlation between GAD and depression in individuals’ needs for a variety of treatment plans. Art therapy may replace other therapies or treatments because it can be seen as a hobby, in addition to a newer type of psychotherapy one could use to help with symptoms of the disorders.

II. Mental Health in Historical Art Figures

Mental health issues are not limited to the average, everyday person. Anxiety and depression can affect anyone, even those whom we hold in high regard. Celebrated artists who have suffered from mental health conditions include Vincent van Gogh, a Post-Impressionist painter, and Yayoi Kusama, a Japanese contemporary artist. Both artists were known for struggling with mental health challenges.

Vincent van Gogh responded to loss and rejection with withdrawal and depression, straining his relationships with his family, teachers, and colleagues (Richardson et al., 2017). His symptoms included some of the major indicators of depression. Van Gogh used artistic techniques, including repetition, to express his struggles, which he described as a “creative endeavor” (Kelly, 2014). According to Richardson et al. (2017), even though van Gogh eventually lost touch with reality, his hands still possessed the ability to express his emotions and imaginings on canvas. Kandinsky (1977) suggested that van Gogh perceived colors as possessing an emotional, psychological, and moral weight (as cited in Richardson et al., 2017). This can be seen in his *Starry Night* (1889) painting (Figure 1).

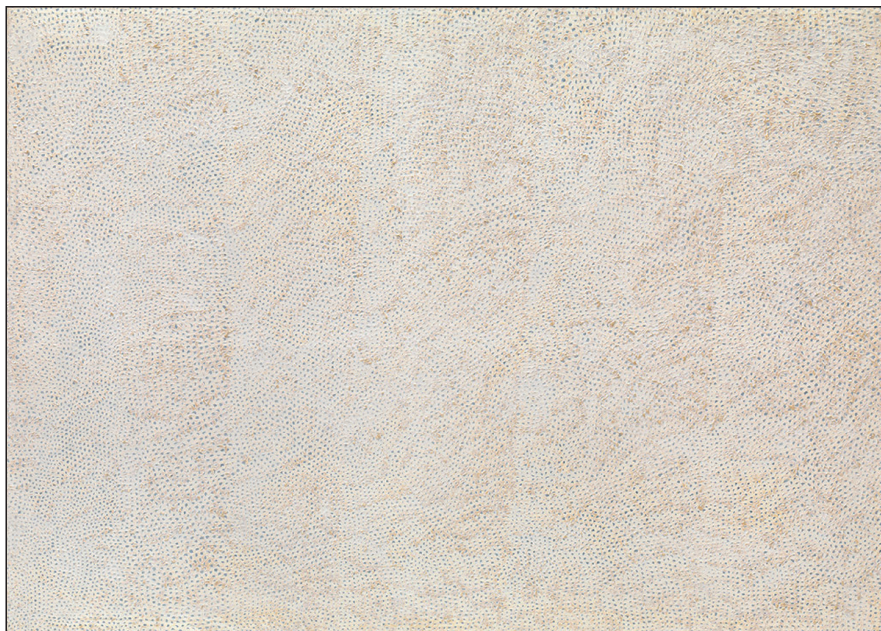
Yayoi Kusama struggled with anxiety neurosis. Beiske et al. (2008) defined anxiety neurosis as “a neurological disorder accompanied by dizziness, nausea, and heart palpitations” (as cited in Chen, 2018, p. 53). The disorder, according to Mayanagi et al. (1996), is divided into two categories: generalized anxiety disorder (GAD) and panic disorder (as cited in Chen, 2018). Kusama repeatedly claimed that she suffered from hallucinations in which she saw nets and dots. These hallucinations may have manifested themselves in “her phenomenal Net paintings, large

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Figure 1. Vincent van Gogh's *Starry Night* (1889)



Figure 2. Yayoi Kusama's *Infinity Net, No. F* painting (1959)



overall paintings that resemble monochromatic nets” (Kusama & Yamamura, 2011, p. 45) (Figure 2). With Kusama’s paintings, it can be hypothesized that she used art-making as a form of expression to communicate what she was seeing or thinking during her mental health struggles. Even though Kusama’s art-historical reassessment has been delayed, she still made her mark on the art world with self-expression and nonverbal communication through painting.

These examples illustrate how art can both become a source of inspiration and an effective and beneficial outlet during an individual’s challenging periods.

III. Art Therapy as a Treatment Option

Making art has helped many famous artists express themselves; art as an intervention can also be used to help everyday individuals struggling with mental health issues. The following studies outline how art therapy has helped individuals’ anxiety and depression levels based on self-report scales. Additional studies will also be cited to support the uses and benefits of art therapy.

For cases of depression, Malchiodi (1998) argued that “one plausible method of treatment is art therapy, which has a long tradition in psychiatric care. Art therapy is a form of psychotherapy that uses art material as its primary mode of expression and communication” (as cited in Blomdahl et al., 2018, p. 170). Preskorn et al. (2004) added that “art therapy has been claimed to be effective to cure depression” (as cited in Rahmani et al., 2016, p. 78). Branch (1992) suggested that art therapy may provide a basis for a person with depression to express his/her depression safely and effectively without moving to different and more harmful means of expression (as cited in Rahmani et al., 2016). Art therapy is also considered a method by which depressed individuals can release aggression without having to engage in any verbal communication (Harnden et al., 2004, as cited in Rahmani et al., 2016).

Art therapy in the treatment of adolescent depression. Connor (2002) and Kendall (2000) reported that art therapy is a particularly effective modality with adolescent depression, which is a common complicating factor in this age group (as cited in Riley, 2003). Riley (2003) stated that traditional verbal therapies may fail to help adolescents with depression because their resistance to therapy is so strong, and their sense of disillusionment is so pervasive. The general complaint of therapists working with adolescents is that they tend to be resistant to the therapy provided, according to Riley (2003).

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However, if the therapist enters the adolescent's depressive world view by offering art as a means of communication, there is a good possibility of creating some alternative...viable treatment [that provides] a lens for viewing adolescents' perceptions through their own illustrations and narratives. (p. 220)

Selekman (1993) stated that if therapy provides adolescents with an expressive vehicle that they enjoy and control, there could be positive outcomes, even with those who are depressed (as cited in Riley, 2003).

One particular girl in a group study conducted by Riley (2003) was shunned by her middle school peers because her family was from Mexico. In the art therapy group, she made a poignant drawing of a broken egg to depict her depression and the loss of her friends, which helped her convey her desperation to other group members and encouraged them to give her the support she needed (Riley, 2003). This non-harmful mode of expression helped the adolescent share her complex feelings about a specific area in her life. It also provided the therapist and other group members with some understanding of what she was feeling and how they might help. Discussions with both the girl and her peers within the group followed the therapy session, which provided additional insight into what the drawing represented.

Using gender-appropriate intervention in treatment is one way to engage adolescents in art therapy. A group study done by Riley (2003) centered on female adolescents from low socioeconomic groups that were presumed to have little or no exposure to any form of cultural imagery other than that of their immediate environment. All were experiencing difficulties at school and expressed anger toward their parents, but they actively denied experiencing any sense of failure or unhappiness. Culturally, the girls in Riley's study were encouraged to look to an early marriage as their only goal, and they had all been sexually active by the age of 14 years old (Riley, 2003). Riley (2001) reported that they were hopelessly disengaged from their therapy sessions and used the time to improve their makeup (as cited in Riley, 2003). As a form of therapy, the author asked each girl to draw a "beautiful" girl's face and color it in with their own cosmetics. Riley reported that "the paper faces that were covered with lipstick, eye shadow, and foundation found a voice" (Riley, 2003, p. 225). This led to the girls acknowledging they had some feelings and questions about the "rules" of their culture. They shared their feelings of anger and their sense of depression at their status as "second-rate citizens and handmaidens to more powerful males" (Riley, 2003, p. 225).

Implementing art therapy as an intervention may provide ther-

apists with the opportunity to interpret their clients' unexpressed emotions. Riley (2003) stated that in every case of adolescent art therapy, it is essential for the therapist to move into the teens' world as much as possible, and then find a metaphor, theme, or an art project that is individualized to their developmental needs and situation. The therapist may need to adjust to the clients' interests to develop a better method of addressing their resistance. This outlet can help a therapist determine what an adolescent is facing in day-to-day life and gain a better understanding of their subconscious emotions.

Interventions integrating art and music therapy. Rahmani et al. (2016) conducted an experimental study with 24 adolescent female participants who were all at least 15 years old. The authors noted that "adolescence is an important shifting stage from puberty to adulthood. Adolescents are prone to [a] variety of physical and mental risks" (p. 78). Monteiro et al. (2015) stated that "one of the most important risks in adolescence is depression, which might severely affect adolescents and hinder them from any potential achievement" (as cited in Rahmani et al., 2016, p. 78). "Achievements" may be educational, familial, social, or extracurricular.

In this study, art therapy was performed as an intervention to help those suffering from depression through activities including painting and drawing with crayons, colored pencils, and watercolor. The experimental group painted for two hours while listening to different types of music, thus integrating music therapy into their treatment (Rahmani et al., 2016). Music therapy is "the intended use of music to attain therapeutic results" (Rahmani et al., 2016, p. 79). One of the primary benefits of music therapy is that it "arouses [the] cognitive functions [that act] on anxiety, depressive phases, and aggressiveness and therefore, considerably improves attitude, communication, and independence," (Guétin et al., 2009, as cited in Rahmani et al., 2016, p. 79).

The findings of this research showed no major changes in the control group's depression scores, as reported through Beck Depression Inventory test (BDI) and Child Depression Inventory (CDI) from pre-test to post-test. However, in the experimental comparison group, the scores from the depression inventory pre-test to post-test decreased considerably. "These findings illustrate that incorporated use of art and music therapy helped lessen depression among the participants of the experimental group" (Rahmani et al., 2016, p. 80). The results for both the control group, which was not exposed to music, and the experimental group, which engaged in art-making while listening to music, are shown below. Table 1 shows the BDI scores pre-test and post-test, and Table 2 shows the mean scores of both.

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Table 1. Scores on Adolescent Report of Depression (BDI) (Rahmani et al., 2016)

CONTROL Pre-test	CONTROL Post-test	EXPERIMENTAL Pre-test	EXPERIMENTAL Post-test
41	40	35	22
41	38	37	21
39	44	41	26
35	34	37	24
37	44	46	14
35	36	47	22
43	49	38	30
41	41	45	24
43	41	47	21
41	54	43	29
44	45	45	22
38	32	39	24

Table 2. Mean Scores on Adolescent Report of Depression (BDI) (Rahmani et al., 2016)

CONTROL Pre-test	CONTROL Post-test	EXPERIMENTAL Pre-test	EXPERIMENTAL Post-test
39.83	41.50	41.67	23.25

Some individuals may benefit from an integration of therapies or treatments, and in this study, the researchers decided to use both art and music therapy. The results do not disregard art therapy as a stand-alone psychotherapy treatment, even though it was used in addition to music therapy, but they provide a basis for future studies in integrated therapeutic interventions.

Clay therapy as an art therapy intervention. Clay art therapy (CAT) is a version of art therapy that can be used in the same manner as other forms of art therapy in psychotherapy treatment. A study by de Morais et al. (2014) explained that the use of CAT in the psychotherapeutic process is a way of discharging negative emotions; this can lead to the patient taking pleasure in the creative act itself. Having manual control over one's feelings facilitates the expression of both conscious and unconscious emotions. Bozza et al. (2012) explained that CAT can provide a release of tension, pleasure, and relaxation, since subjects construct something that expresses their "truth" (as cited in de Morais et al., 2014).

The study conducted by de Morais et al. (2014) investigated the effects of clay work on 24 psychiatric patients receiving treatment for anxiety, depression, and other mental health disorders. Participants were selected based on the following inclusion criteria: “regular attendance at the institution, participation in at least eight sessions of clay work, diagnosis conducive to this therapy (e.g., depression, ... anxiety disorder), [and] voluntary participation in the activity [of clay therapy]” (de Morais et al., 2014, p. 206). Twelve participants in the control group agreed to participate but did not complete any clay work, saying they had no affinity for art; the other twelve participants in the experimental group completed sessions of clay work. Those in the experimental group were divided into two groups of six who completed eight sessions of therapy for eight weeks on Tuesdays (group 1) or Thursdays (group 2). During each session, the patients reported their feelings and described the meaning of the elaborate sculptures they made during the sessions (de Morais et al., 2014).

Findings from this study showed that depression and anxiety scores differed between the control and clay work groups:

The clay work group had an average score indicative of mild depression (13 ± 0.97 , $p = 0.0039$), while the control group had an average score indicative of moderate depression (23.1 ± 2.9). As for anxiety, the clay work group exhibited less anxiety (44.9 ± 3.37 , $p = 0.066$), while the control group exhibited increased anxiety (52.08 ± 3.79). This suggests that therapy with clay can improve depression and anxiety. (p. 207)

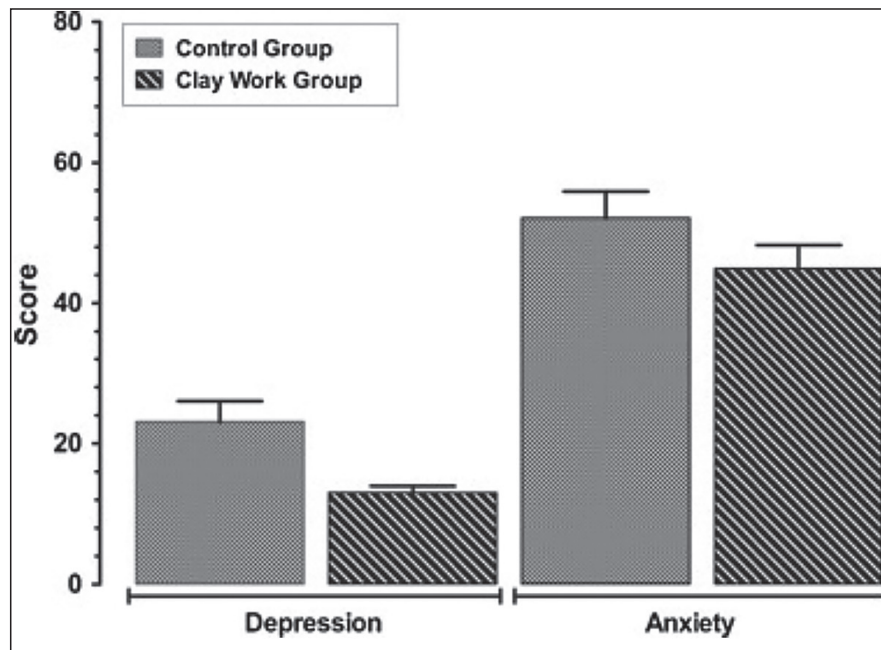
Figure 3 provides an illustration of the findings.

The study conducted by de Morais et al. (2014) supported data showing that art therapy, and in this specific case, clay therapy, can be used as an intervention for individuals, regardless of age. This study also suggested that art therapy, as a broader term, has a significant, positive effect on depression and anxiety scores for those individuals who participate. Furthermore, clay work can be used by psychologists, along with other forms of art therapy, to gain a better understanding of the client's needs. The information in this study can be used longitudinally in hospitalized patients who have more severe cases of a mental health disorder, and it is also transferable to clients not admitted into psychiatric care.

Clay art therapy in treating major depressive disorder. Research by Nan and Ho (2017) examined the effects of CAT on outpatients who suffered from major depressive disorder (MDD) in a randomized, controlled trial. Nan and Ho (2017) stated that a substantial body of literature

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Figure 3. Comparison of Depression and Anxiety Scores Between Clay Work and Control Groups (de Moraes et al., 2014)



has demonstrated the efficacy of various psychotherapeutic approaches, including art therapy, in treating MDD. Bar-Sel et al. (2007), Curl (2008), and Gussak (2009) reported that art therapy has been shown to alleviate depressive symptoms and reduce stress, while Puig et al. (2006) reported that art therapy strengthens patients' emotional expression, spirituality, and psychological well-being (as cited in Nan & Ho, 2017). As a form of art therapy, clay work has been shown to reduce emotional distress (Kimport & Robbins, 2012), strengthen ego resilience (Jang & Choi, 2012), and help in integrating multisensory processes through three-dimensional creative work (Elbrecht & Antcliff, 2014; Sholt & Gavron, 2006, as cited in Nan & Ho, 2017).

CAT involves various processes, ranging from a gentle touch to the intense input of physical energy towards pounding, rolling, and molding the clumps of clay (Nan & Ho, 2017). According to Hinz (2009), the various internal processes involved in the art of clay-making can interact to aid emotion regulation and enable psychophysiological attunement, which enhances the regulatory functions of the autonomic nervous system (Schore, 2009, as cited in Nan & Ho, 2017). Vessel et al. (2012) conducted an MRI study showing that "the process of nonverbal means of creative art appreciation involves two distinct neuronal networks that connect to the frontal cortex and subcortical regions for executing tasks

that require emotional regulation and self-reflection” (as cited in Nan & Ho, 2017, pp. 238-239). In general, art-making can aid the regions of the brain associated with processing nonverbal communication and support body-based affective information associated with various motivations (Schoore, 2002, 2009, as cited in Nan & Ho, 2017). Nan and Ho added that “creative art appreciation or art making can potentially assist in regulating emotion” (Nan & Ho, 2014, as cited in Nan & Ho, 2017, p. 239).

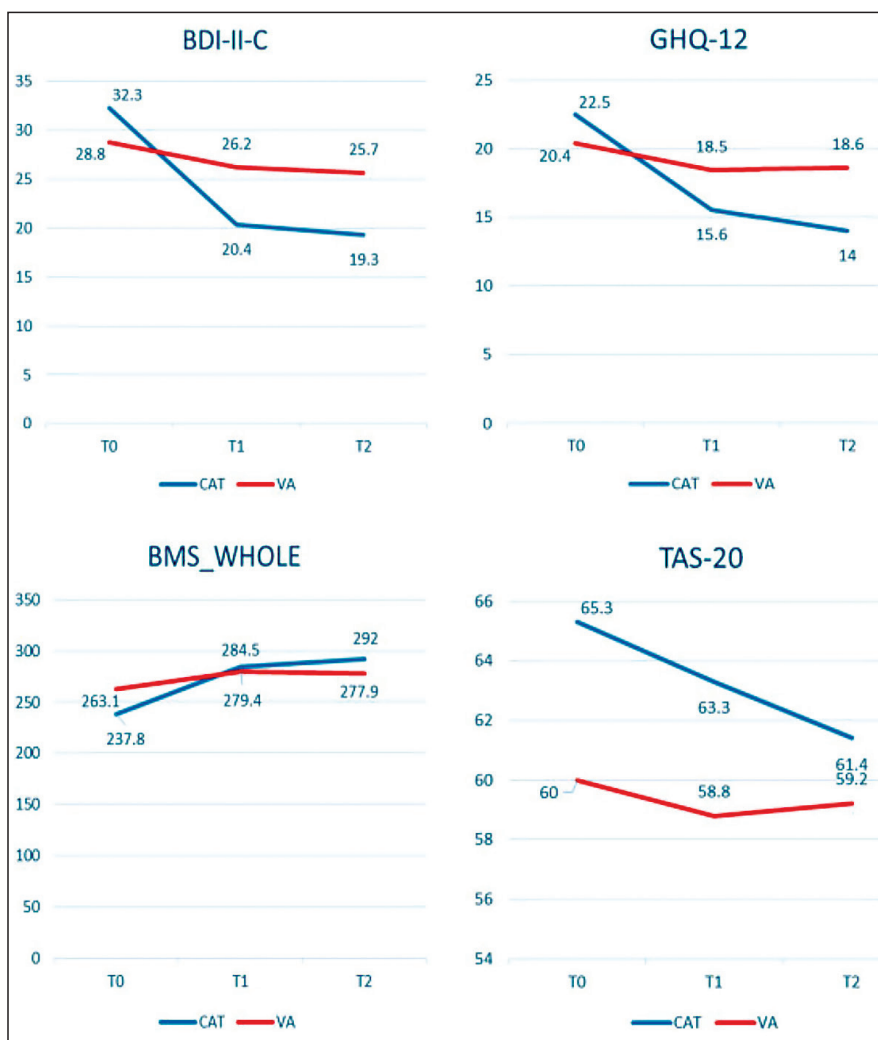
The study conducted by Nan and Ho (2017) included 100 participants who were divided randomly into two groups: a CAT group and a visual analysis (VA) group. Participants in the CAT group attended six, 2.5-hour weekly sessions. At the end of each session, they held a brief discussion and reflection session on the treatment process and shared their clay creations. A qualified art therapist facilitated this group. The VA group also attended six, 2.5-hour weekly sessions, but these sessions were facilitated by social workers. The Beck Depression Inventory II test (BDI-II-C) was adopted as the primary outcome measure to assess multiple aspects of their depression symptoms, which included cognitive, emotional, behavioral, and physical aspects of the condition (Chen et al., 2011; Diedrich et al., 2016, as cited in Nan & Ho, 2017). The study also employed the 12-Item General Health Questionnaire (GHQ-12), an established and validated scale used to measure current mental health in two areas: the inability to carry out normal functions, and the appearance of new and distressing symptoms (Chong & Wilkinson, 1989; Pan & Goldberg, 1990, as cited in Nan & Ho, 2017). The Body–Mind–Spirit Well-Being Inventory (BMSWBI), “...an established, validated, and reliable scale for measuring holistic body-mind-spirit...” was also used (Hamid & Cheng, 1996; Ho et al., 2004; Ng et al., 2005, as cited in Nan & Ho, 2017, p. 240). Additionally, data were collected with the 20-Item Toronto Alexithymia Scale (TAS-20-C), which measured cognitive-emotion regulation patterns (Ziadni et al., 2016, as cited in Nan & Ho, 2017). The rest of the design was based on assessment forms given at baseline (T0), immediately post-intervention (T1), and 3-weeks post-intervention (T2) (Nan & Ho, 2017).

Findings from this study concluded that the CAT group resulted in a greater decrease in MDD symptoms than did the nondirective VA group in the two treatment groups (T1 and T2). A significant between-groups difference was identified in the combined effect on the interrelated outcome variables of depressive signs, general health, and BMSWBI major scales and subscales (Nan & Ho, 2017). Concerning the within-groups differences, the depressive signs in the CAT group exhibited a rapid drop from baseline to T1 ($d = -1.1$) and T2 ($d = -1.2$). General health evidenced

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significant improvement after treatment at both T1 ($d = -0.9$) and T2 ($d = -1.1$). Therefore, changes in both the depressive signs and general health in the CAT group revealed a large effect (Nan & Ho, 2017). “In the VA group, the changes in depressive signs, general health, and BMS well-being... were non-significant at T1 and T2” (Nan & Ho, 2017, p. 241). Visual representation of the results can be seen in Figure 4.

Figure 4. Measurements of Depression, General Health, Body-Mind-Spirit Well-Being, and Alexithymia Over Three Assessments (Nan & Ho, 2017)



Group art therapy intervention combined with breath meditation. A study by Kim et al. (2014) examined the effectiveness of group art therapy (GAP), combined with breath meditation, in promoting the subjective well-being of depressed and anxious adolescents. This study in-

roduced art into group psychological therapy used to diagnose and treat people with psychological difficulties through art activities. The purpose of the study was to extract subconscious feelings naturally and to allow participants to create images for their injuries through art activities. The method was intended to reveal subconscious and hidden thoughts and emotions (Kim et al., 2014). As stated by Malchiodi (2003), “art activities can reduce fear or emotional stress by causing physiological reaction[s] to transform and relax feelings” (as cited in Kim et al., 2014, p. 520).

The study’s subjects consisted of 24 high school male students whose symptoms of depression and anxiety were assessed using Beck’s depression and anxiety inventory (Kim et al., 2014). The subjects were divided into three groups: Group 1 had both art therapy and breath meditation combined, Group 2 had only group art therapy, and Group 3 served as the control group (Kim et al., 2014). Groups 1 and 2 were then divided into initial, intermediate, and later stages for the intervention and assessment. Each session lasted about 80 minutes and included an introduction period, followed by activities and sharing, but the introduction differed in each group. The introduction period for Group 1 included warm-ups and performance of breath meditation while listening to meditation music. The meditation time was gradually increased from five to 20 minutes. Afterwards, art therapy was implemented. In the introduction period for Group 2, the members talked about their current feelings and performed group art therapy, which consisted of 50-minute art activities, sharing, and 10 minutes of finishing touches (Kim et al., 2014).

The results in Table 3 represent a statistically significant increase in scores when art therapy was applied to Groups 1 and 2 (Kim et al., 2014). These scores suggested that art therapy is effective in reducing depression and anxiety scores in the participants. Group 1’s activities demonstrated the most effective results, followed by Group 2. The control group (Group 3) showed the least improvement.

Table 3. Average and Standard Deviation Values of Intergroup Test Scores for Subjective Well-Being: Pre-Test, Post-Test, and Follow-Up Test (Kim et al., 2014)

Variable	Times	Group 1 (n = 8)		Group 2 (n = 8)		Control group (n = 8)	
		M	SD	M	SD	M	SD
Subjective well-being	Pre-test	3.28	.41	3.46	.36	3.33	.35
	Post-test	5.06	.40	4.85	.16	3.01	.18
	Follow-up test	5.58	.62	5.00	.13	3.01	.24

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As in other studies, Kim et al. (2014) included other forms of therapy, such as breathing exercises, meditation, and music therapy, in their intervention. In contrast, however, to the first study, this study conducted art therapy as a stand-alone intervention for Group 2. These results correlate with the research that art therapy is an effective treatment for anxiety and depression in comparison to a control group that did not engage in art therapy. The final mean scores of Group 2's follow-up tests are not significantly different from Group 1's scores.

CONCLUSION

Art is a non-harmful outlet for the expression of an individual's feelings. Art therapy has been slowly gaining support as an intervention for people suffering from mental illnesses. A growing amount of research on art therapy as a useful intervention in mental health treatment illustrates its positive effects on specific mental illnesses, including anxiety and depression. These studies addressed the hypothesis that art therapy has positive effects as an intervention on anxiety and depression compared to control groups, when the intervention was not implemented with various types of art media. As art therapy continues to grow as a profession and as an intervention, there will be more research conducted in the future. Earlier research will provide a foundation for future training programs involving art therapy and phenomenological art therapy as means of improving anxiety and depression scores in young adults, which will lead to a better understanding of how art therapy as an intervention can provide quality care for those in need of a different type of psychotherapy.

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