

The Effectiveness of Art and Music Therapy

Jyothi Doonan

Jyothi Doonan, California High School

Abstract

This paper will investigate the efficacy of art and music therapy as a complementary treatment for various conditions through synthesizing current knowledge. Conducted through an extensive literature review search on the Google Scholar database. The literature was found through prompts such as the effectiveness of art and music therapy and the methodology for both. Benefits for patients with anxiety, depression, physical conditions, and various other struggles were found. This paper examines the methods of art and music therapy, as well as the changes and improvements made to this therapeutic modality over the last several decades. Overall, art and music therapy have been shown to be very effective in helping many different patients. This literature review will inform new research such as longitudinal studies whose goal is to improve the therapeutic modalities even more.

Keywords: Art Therapy, Music Therapy, Anxiety

Introduction

Art therapy and music therapy are forms of psychotherapy intended to help people with a variety of mental and physical health conditions. Some ways art therapy and music therapy can be implemented include painting, drawing, sculpting, listening to music, writing music, and playing instruments. Art therapy began to be practiced in the United States in the sixties, and the American Art Therapy Association was founded in 1969 (Strang, 2019). Edith Kramer is credited as the person who gave art therapy its name, and she was one of the most influential people in making art therapy what it is today (Nguyen, 1994). Margaret Naumburg is referred to as the founder of art therapy, and she began to integrate art into therapy in 1958 (Nguyen, 1994). The American Music Therapy Association suggests that music has been seen as beneficial to our health since as early as in ancient Greece, based on the writings of Aristotle and Plato (Ketelsen, 2003). Throughout the 1800's there were several medical articles describing music as being therapeutic, and in 1903, the National Society of Musical Therapeutics was founded by Eva Augusta Vescelius (Davis, 1993). However, it wasn't until 1998 that the American Music Therapy Association was founded, and research began to be taken more seriously. Art and music therapy are often used as complementary therapies to other forms of treatment, such as cognitive behavioral therapy or medication (Hu et al., 2021). They might also be used because some people find other types of therapy to not be as effective, or because they don't want the side effects of medication (Hu et al., 2021). Art and music therapy are both used often on patients with disorders related to anxiety and depression, and both have been shown to raise serotonin levels in patients (Bleich et al., 1988). There have been significant changes and improvements in both the methods of art and music therapy, as well as research done surrounding them. Art or music may be used to benefit mood, relieve anxiety, or increase creativity; however, these uses are not always the same as art or music therapy.

The American Art Therapy Association defines an art therapist as “a clinician with a master's or higher

degree trained in art and therapy that serves diverse communities in different settings” The American Music Therapy Association defines music therapy as “an established health profession in which music is used within a therapeutic relationship to address physical, emotional, cognitive, and social needs of individuals” These definitions mean that art and music therapy are conducted in the presence of a licensed therapist, rather than just using art or music therapy to be beneficial. Both art and music therapy are being developed more and more as we continue to study their benefits, and they are continuously changing and improving.

Literature Review

Contemporary Research Methods

Art and music therapy efficacy studies greatly improved in the 1990s despite being conducted for decades prior (Iguina & Kashan, 2023). Generally, art therapy outcome studies are divided into three groups: randomized controlled trials, non-randomized two-group studies, and non-randomized one-group studies (Regev & Cohen-Yatziv, 2018). Randomized control trials involve an experimental group and a control group, and participants are organized into the groups randomly (Regev & Cohen-Yatziv, 2018). Non-randomized two-group trials have an experimental group and a control group, but there is no randomization regarding which participants are in the experimental and control groups (Regev & Cohen-Yatziv, 2018). Non-randomized one-group trials do not have a control group and an experimental group. They involve a study conducted on one group undergoing treatment, and since there is no control or experimental group, there is no randomization (Regev & Cohen-Yatziv, 2018). While all three of the aforementioned study types are helpful in the discussion of art and music therapy outcomes, non-randomized two group trials are seen as strongest and most trustworthy because there is randomization to account for bias and any pre-existing factors that could influence results (Simkus, 2023). Additionally, many studies identify changes in mental health symptoms or biometric data as outcome variables (Regev & Cohen-Yatziv, 2018). Examples of mental health symptoms include feeling depressed, sleep issues, or severe anxiety (Hamilton, 1960). Similarly, examples of biometric data may include heart rate, blood pressure, and breathing rate (Wakim et al., 2010). Art and music therapy studies can also be classified by study sample make up, with the following main groups: individuals with mental health disorders, individuals undergoing cancer treatment, trauma patients, prison inmates, older adults, and individuals with other specific medical conditions (Regev & Cohen-Yatziv, 2018). Some of the research also examines the impact of art and music therapy in a general clinical setting. These categories assist clinicians and researchers in translating research results to similar samples or populations.

Most studies done on art and music therapy have a similar format. Generally, there is a group of people that will undergo art or music therapy, and after several months of receiving the treatment, they will review how their symptoms have changed (Regev & Cohen-Yatziv, 2018). There will be some randomized and some non-randomized studies, as well as some controlled and some not. For example, one study titled “Efficacy of Group Art Therapy on Depressive Symptoms in Adult Heterogeneous Psychiatric Outpatients,” (Chandraiah et al., 2012), focused only on one small group with no randomization, whereas another study titled, “The outcome of short-term psychodynamic art therapy compared to short-term psychodynamic verbal therapy for depressed women,” (Thyme, 2007), looked at two randomly assigned larger groups. It is important to note the differences in the way these studies are conducted because they were done in such different ways, which could impact the results of the studies. This is because randomization and the presence of a control group can help to account for any pre-existing factors that

might influence the results. There are also many different ways to measure the results, and it is difficult to compare results due to this.

While most studies done on art and music therapy follow this format, there are several outliers. For example, one article titled “The Efficacy of Music Therapy,” (Wakim et al., 2010), describes how their study was meant to find the short-term effects of music on mood and anxiety, rather than long term symptom improvement. Their method of study was to survey patients in medical settings to find out how music has an impact on their anxiety going into the medical procedure. Most of these studies were done before patients were going into surgery, often before anesthesia. They stated that generally, patients may have a higher heart rate, blood pressure, and respiratory rates going into anesthesia, and they tested how playing music in the waiting room before the procedure affects this (Wakim et al., 2010). They found that blood pressure, heart rate, and respiratory rates were all lowered after the music played.

While studies have been done in many different ways, most of them focus on symptom improvement before and after the intervention of art and music therapy. Some factors that may change the way the studies are conducted can include randomization, size of the groups, the presence of a control group, time spent receiving the treatment, and the method in which the treatment is given (Regev & Cohen-Yatziv, 2018). Another factor can be the way the results are measured, the majority of studies utilize a self-assessment, but there are others that measure results based on a therapist’s observations. Some common tests that were used to measure results were: Scale for the Assessment of Negative Symptoms (SANS), Hamilton Rating Scale of Depression (HRSD), Spielberger’s State-Trait Anxiety Inventory (STAI), Hamilton Anxiety Scale (HAM-A), and Zung Self-Rating Anxiety Scale (SAS), (Regev & Cohen-Yatziv, 2018). Most of these are a scale of anxiety or depression and are based on a self-report, which can impact the results as well. Expectations, question interpretation, social-desirability bias, and introspective ability are some factors that can make self-reports biased and less accurate (Salters-Pedneault, 2023). Overall, there are many different studies done, and it is important to understand the differences they had in order to be able to analyze the results they yield.

Effectiveness of Art and Music Therapy on Individuals with Anxiety

Many study outcomes validate the benefits of art and music therapy, especially for patients with anxiety disorders. Regarding age, most studies testing the effectiveness of these therapies on anxiety use adult samples, although some also research the effects on teenage and child samples. In studies of patients with medical conditions and comorbid anxiety disorders, art and music therapy lead to improvement in both anxiety and other physical health symptoms (Hu et al., 2021). Studies typically use self-report data or surveys to measure changes in anxiety symptoms. Additionally, patients with breast cancer report that some of their physical symptoms have improved over the course of several months of therapy (Monti et al., 2006). Music therapy in particular has shown to be calming and beneficial for physical symptoms, as it can lower blood pressure, heart rate, and respiratory rates (Wakim et al., 2010).

Most research done on these types of therapy is done over 2-3 months of therapy, and patients are asked to self-report their results before and after. Art and music have both been used for decades to improve mood and creativity, there is a need for more long-term studies to strengthen the results we have seen thus far (Grebosz-Haring et al., 2022).

Art and music therapy are very beneficial on anxiety, but they can also help for a number of other related issues. Many patients with anxiety also have symptoms of depression or are struggling with post-traumatic stress disorder (Smoller, 2015). Most anxiety related disorders have been shown to benefit from art and music therapy, and this group of patients are studied significantly more than any other group (Abbing et

al., 2018). Anxiety disorders affect many people, and art and music therapy can benefit a lot of people dealing with this set of symptoms. Although art and music therapy have been shown to help people over several months, they have also been shown to immediately impact stress and anxiety in specific situations. (Wakim et al. 2010). Music can be played before or during a stressful time, like a surgery, and this shows physical benefits. Music therapy has also been tested and shown to significantly decrease post meal anxiety for patients with eating disorders (Hilliard, 2001).

Overall, art and music therapy can be very helpful for many patients with anxiety. This can include patients with other disorders along with anxiety, any anxiety disorders, and people experiencing an anxious situation. Using art and music therapy methods on patients, often along with other forms of therapy can be a way to alleviate anxiety symptoms and improve mood.

Expanding Art and Music Therapy Benefits to Broader Populations

The majority of studies done on art and music therapy focus on depression or anxiety, because these are more common disorders that might benefit from art and music therapy. However, art and music therapy are also used to treat a number of other patients with specific disorders, as well as various other groups. Some of these groups may include cancer patients, prison inmates, people with autism, schizophrenia patients, and the elderly.

Art therapy and music therapy are often used to help cancer patients (Öster et al., 2007). Many studies show that going through cancer and treatment can cause anxiety, depression, body image issues, and other mental health problems (Regev & Cohen-Yatziv, 2018). Cancer patients who go through art or music therapy throughout their various types of treatment or over a duration of several months have been shown to improve in several aspects (Thyme et al., 2009). Their general stress levels are lowered, as well as their anxiety and depression, in many cases (Svensk et al., 2009). Oftentimes patients will report lessened symptoms and physical improvements as well (Monti et al., 2006). One benefit of art and music therapy that has been shown especially in cancer patients is an improvement in body image and self-esteem (Svensk et al., 2009). While not all cancer patients will go through art or music therapy, many hospitals will offer art classes, music groups, or other forms of creativity for their patients.

People with autism are also a group that can strongly benefit from art and music therapy treatments. Margaret Naumber, credited to be the founder of art therapy, believed that art therapy was beneficial because it was from the subconscious and was a way of enhancing communication (Nguyen, 2015). Many people with autism may struggle with communication, and some may be nonverbal. Art and music therapy are both ways that can help someone express their thoughts and feelings, and they offer a way of communication that is different from what is often used. The Brain Injury Association of America describes how, “Speech and singing share neural systems, which means that we can use music and singing to positively impact many speech and language goal areas,” (Hoemberg et al., 2014). This is beneficial to people with autism because they might often struggle with speech and language, and music therapy can be a way to benefit these areas.

Schizophrenia patients are a group that can find benefits in art and music therapy. Schizophrenia is a condition in which people may suffer from symptoms such as delusions, cognitive issues, and incoherent speech (American Psychiatric Association, 2022). Since speech has been linked to music and singing, music therapy can be helpful in improving communication for schizophrenia patients (Ivanova et al., 2022). There is a lack of studies done on schizophrenia and how it is impacted by art and music therapy. This can make it difficult to prove whether or not art and music therapy are actually effective for this group. Art and music therapy may help for certain issues associated with schizophrenia, like

communication problems, but there is not enough concrete evidence to prove that art and music therapy are effective for these patients. Many people with schizophrenia who undergo art and music therapy treatments report improvement in symptoms and quality of life, but there is still not enough evidence to prove that this is an effective method (Ivanova et al., 2022).

Older adult patients with Alzheimer's and Dementia have frequently been included in art and music therapy outcomes research. Some symptoms of these diseases include memory loss, mood changes, and confusion (American Psychiatric Association, 2022). Art and music therapy have both been shown to have positive impacts on mood, although these results have not always been consistent between studies. Dementia and Alzheimer's patients have often reported benefits in mood and physical symptoms. However, the article "Art Therapy: A Complementary Treatment for Mental Disorders," discusses further some of the studies done on dementia patients. It recognizes that there are often only improvements in mood and stress in the early stages of dementia, and the article suggests that dementia patients may only be able to enjoy and benefit from these therapies as the disease progresses (Beard, 2011). Due to memory loss, confusion, and several other symptoms, it can be difficult for patients of Alzheimer's and dementia to benefit at all from art and music therapy, and they will often report that there is no significant improvement to their symptoms (Hu et al., 2021). Multiple articles suggest that art and music therapy may only be effective in Alzheimer's and dementia patients if the disease is still in its early stages, otherwise it can become ineffective.

Art and music therapy have been shown to have many positive impacts on anxiety, depression, trauma, and various other disorders. They are also shown to improve communication, creativity, overall mood, and more. However, several studies also noted physical effects that art and music therapy can have on a patient. In a study about how art therapy can impact cancer patients, women with breast cancer reported significant changes in overall health, including their physical health (Thyme et al., 2009). They reported symptom improvement and in some cases weight loss as well (Effa et al., 2020). A study done on music therapy and anxiety showed that physical effects of anxiety could significantly improve when music was playing (Raglio et al., 2015). The study was done in a hospital waiting room before patients were put under anesthesia and went into surgery. They tended to have high blood pressure, respiratory rates, and heart rates (Wakim et al., 2010). When music was introduced to the setting, all three of these rates were lowered in most people that were studied, showing that music can have physical impacts in addition to the mental benefits it can provide. Art and music therapy not only can be used to assist mental health, but also can have physical improvements in some cases.

Analysis/Discussion

Uses of Art and Music Therapy for Other Disorders and Settings

Studies have shown that both art and music therapy can improve symptoms of depression, anxiety, and other mental health disorders, as well as benefit people in other stressful situations. Major Depression is another disorder that is often studied alongside Generalized Anxiety Disorder. This is because many patients with a Major Depressive Disorder, may also have Generalized Anxiety Disorder, and there is a strong association between the two. Major Depressive Disorders, according to the DSM-5, are diagnosed based on symptoms of lack of interest, depressed mood, sleep issues, fatigue, and suicidal thoughts (American Psychiatric Association [APA], 2022). Art and music therapy have been shown to improve overall mood and self-image, both of which are symptoms of depression (Svensk et al., 2022). Similarly, body image can improve after undergoing art and music therapy (Svensk et al., 2022). These observations

along with many others indicate that art and music therapy can be beneficial for people with mood concerns.

Art and music therapy has also been correlated with higher levels of creativity and improved communication (Hass-Cohen & Findlay, 2015). Thus, art and music therapy can be used to help people with autism spectrum disorder (ASD) and other disorders in which people might struggle with communication or social interaction (Hirvikoski et al., 2015). Some symptoms of ASD may include sensory hypersensitivity, decreased ability to utilize and understand non-verbal gestures, and difficulty tolerating change (APA, 2022). Art and music therapy are often used for children with ASD who are nonverbal since these therapies support nonverbal forms of communication. The Anxiety and Depression Association of America reports that around 40% of people that are on the autism spectrum also meet criteria for an anxiety disorder (Hollander & Burchi, 2018). Individuals who meet criteria for both of these disorders may especially benefit from art and music therapy interventions.

Another group of people that have been studied when undergoing art and music therapy are patients with Major Neurocognitive Disorders (MND). Patients with MND may experience memory loss, language issues, and problems in social cognition (APA, 2022). These symptoms will worsen as the disease progresses and can sometimes result in Alzheimer's Disease. The issue of memory loss in particular presents a complicating factor because patients may not report changes in symptoms due to memory issues versus lack of change (McCaffrey et al., 2011). This does not mean that patients with MND cannot benefit from art and music therapy, but rather challenges researchers and clinicians to improve measurement of these changes in populations with memory issues. Patients who are diagnosed in earlier stages of MND may benefit more from art and music therapy than patients diagnosed in later stages because they often suffer from less memory loss and are able to be continuously impacted by the therapy. In later stages, the memory loss may make it difficult to connect one session of therapy with another, therefore making it difficult to have a longer-term effect.

There have been several studies done on schizophrenia and art music therapy, and some researchers disagree about interpretations of the results. Schizophrenia, according to the DSM-5, is characterized as a psychotic disorder that can cause delusions, hallucinations, disorganized speech, dysphoric mood, and derealization (American Psychiatric Association, 2022). Since schizophrenia patients often experience communication difficulties art and music therapy can assist these patients with nonverbal communication. Schizophrenia is a complex disorder that has a wide range of symptoms necessitating medication treatment. However, it has been suggested by researchers that patients with schizophrenia use art or music therapy as a complementary form of therapy to go along with medication and other therapies (Ivanova et al., 2022). People with schizophrenia may also struggle with mood and emotions, which art and music therapy can both improve on. Research has shown a relationship between schizophrenia and serotonin, and studies have shown that art and music therapy can lead to serotonin increase (Bleich et al., 1988).

There are many benefits people dealing with physical illnesses and struggles that aren't related to mental disorders can find from art or music therapy. Cancer patients are a group that has been studied often while undergoing art and music therapy. Many cancer patients report an improvement in mood, self-image, and even physical symptoms after going through several months of therapy (Regev & Cohen-Yatziv, 2018). Cancer patients may often experience anxiety and depression, and many patients in a study done on people with breast cancer describe negative self-image after going through chemotherapy (Hung et al., 2017). Art and music therapy can be beneficial for them in many ways; it is often calming, improves overall mood, and when done in groups can connect people to others going through the same struggles. Many

clinics for chemotherapy offer art classes or have art studios in the facility for patients to use, and although this is not technically art therapy because there is not always an art therapist present, it shows that many people find art to be beneficial to mood and anxiety.

Art and music therapy have also been used on prison inmates and people who have gone through traumatic experiences but aren't necessarily diagnosed with a mental disorder. The vast majority of this group reports an improvement in their mood and their quality of life since beginning therapy (Gussak, 2006). Patients with eating disorders are also often offered art and music therapy during stressful times, such as before or after meals (Griffin et al., 2021). Patients may experience a lot of anxiety during this time, and art and music therapy can be calming. Throughout a lot of the research, music therapy is more often used to deal with short term stressful events that cause physical and emotional anxiety symptoms (Wakim et al. 2010). This indicates that art and music therapy can be beneficial to many different groups, even if someone is not diagnosed with a mental health disorder.

Advancements in the Fields of Art and Music Therapy in the Last 40 Years

Overall, art and music therapy have both changed significantly in the past several decades, primarily due to the increase in outcomes research of therapeutic interventions. Before the 1990's, art and music therapy did exist but there was a lack of research done on these types of therapies (Li et al., 2021). Art therapy was beginning to be talked about in the early 20th century, but it wasn't until around 1940 that it began to become relevant (Howie, 2017). Although the first original study done on music therapy was in the late 18th century, music therapy became a more common intervention to help veterans cope after the two world wars (Junge, 2010). The founding of the American Music Therapy Association and the American Art Therapy Association in the second half of the 20th century have made many contributions to the research and practice of art and music therapy. As of 2022, over two million people practiced music therapy in 2022 (American Music Therapy Association, 2021). Art and music therapy professions are also growing in size with the projected growth rate of both art and music therapists being 15.59% (College Board, 2024). Over the last several decades, art and music therapy have expanded the number of interventions available to clients. Music had been used as a way to benefit mood and stress for centuries before it became a popularized method of therapy, and only in recent times has it been expanded upon more (Altenmüller, 2015). Music therapy originally consisted of listening to music as a way to help veterans cope after wars, but since then, music therapists have gotten more creative in the ways they do therapy. Therapists have recently expanded interventions to include having patients improvise music, talk about music, dance, write music, play instruments, sing or play in groups, and even make instruments (Snyder-Lovera, 2024). Art therapy has also been expanded on. It originally began as a way to help children improve creativity, and then to help patients improve communication through painting or drawing (Davidow, 2018). Art therapists have since begun using multiple art mediums such as sculpting, drawing with chalk, using clay, collages, photography, and finger painting (Elbe, 2024). Some therapists consider music and poetry to be a part of art therapy as well. Overall, there have been significant changes to both art and music therapy in the last 40 years, and those changes are only possible because of the increase in research.

Gaps in Research

It is important to note that there are some gaps in the research regarding art and music therapy. Art and music therapy have only begun to be studied thoroughly and in depth since the 1990's, and up until recently, there were very limited groups that were studied (Grebosz-Haring et al., 2022). Art and music therapy are both continuously changing in methodology and this makes it difficult to draw conclusions

about the therapy. Not all studies are done in a consistent or trustworthy way. Many studies have no control group, have patients measure outcomes in different ways, or only focus on one group rather than multiple (Regev & Cohen-Yatziv, 2018). When experiments use different methods of measuring the results of therapies, it can make the data difficult to interpret. There are many different surveys, tests, and self-reports that are used when evaluating the effects of these therapies, and there is not one consistent scale that makes research easy to compare (Phelan & Wren, 2006). The majority of studies have patients record their own results in surveys or by ranking their symptoms on various scales, which makes it difficult to say how accurate they are (American Psychological Association, 2018). Patients may have different interpretations of the survey questions they are given, and people often consciously or subconsciously want their results to look good and show improvement, this is called the social desirability bias (Latkin et al., 2017).

One important point to note is that there are many gaps in the research done on art and music therapy. An article written about art therapy suggests that many findings of the studies done on art therapy aren't concrete enough to make the claim that art therapy is effective (Grebosz-Haring et al., 2022). The article describes how the studies done surrounding art therapy are not consistent in their methods, and therefore do not have strong enough evidence to prove that art therapy is useful. The same goes for music therapy because much of the research done on music therapy is similar. Although there are many different studies and experiments looking at art and music therapy, the treatment types and ways of measuring results can vary, and this can cause issues surrounding how trustworthy the studies are (Miyatsu, 2019). There are dozens of different types of tests and surveys patients are asked to complete after they have undergone the different types of treatment, and because of this, it is difficult to say how effective each treatment is (Miyatsu, 2019). Many of the tests to measure symptom improvement after treatment are also self-reports, and this is another factor that makes it more complicated. It is important to recognize that there are many gaps in the research done on art and music therapy that make it difficult to prove the effectiveness of the therapies, and that although a lot of studies done show that art and music therapy are beneficial, there is not always enough concrete evidence to prove this.

Some studies involve measuring blood pressure, respiratory rates, or heart rates to determine physical symptoms of stress or anxiety, but this only covers a very small portion of the studies done and many studies are not related to anxiety or physical symptoms at all (Wakim et al., 2010). Although there are improvements that can be made to the experiments and a need for more in-depth studies, most research reports improvements. There are several studies that found no significant change in patients, for example, research done on elderly patients with dementia or Alzheimer's show little to no improvement in symptoms due to memory difficulties (McCaffrey et al., 2011). However, these results are often outliers and have no significant impact on the overall effectiveness. Other studies also have participants who report no noticeable improvements since they have begun therapy, and this makes some researchers question the effectiveness of art and music therapy (Grebosz-Haring et al., 2022). However, the majority of studies do show reports of significant improvement in symptoms of anxiety, depression, and many other mental disorders along with people dealing with other issues (Regev & Cohen-Yatziv, 2018). The main solution researchers present to the lack of evidence to back up their claims is to suggest art and music therapy as complementary treatments to various disorders (Ivanova et al., 2022). This might only be relevant for certain groups, such as patients with more severe physical conditions or a diagnosed mental health disorder, such as patients with schizophrenia, anxiety, depression, or autism. A complementary treatment means that these patients would receive another form of treatment, such as medication or cognitive

behavioral therapy (Zollman & Vickers, 1999). This is useful because a patient with schizophrenia, for example, would likely need different evidenced-based treatments as first line interventions before being referred to art and music therapy. Since art and music therapy have less research to back them up, people suffering from more severe conditions should rely on treatments that have evidence supporting them. However, for patients not already receiving treatment for their condition, art and music therapy can be a way to improve mood, creativity, and communication. For example, prison inmates or cancer patients might benefit from art or music therapy because although they may not require therapy or medication for their mental health, they can find new benefits in art or music therapy (Regev & Cohen-Yatziv, 2018). There are many gaps in the research done on art and music therapy, and before interpreting the research done on these therapies, it is important to be aware that they do not have a lot of evidence backing them up or are studied thoroughly (Grebosz-Haring, 2022). It is also important to know that the majority of studies surrounding art and music therapy have only been done over the length of several months, and there is little data extending beyond that to prove long term effects.

Conclusion

In the last several decades, art and music therapy interventions have grown and developed substantially into respected forms of therapy that research has shown to eliminate symptoms for various groups. Research demonstrates large improvements in these practices, and they have been able to grow into popularly practiced therapies (Li et al., 2021). This has only been possible due to the number of studies done on these therapies, as well as the expansion of methods of implementing the therapies.

While art and music therapy started as drawing, painting, or playing music to help process emotions and improve symptoms, these therapies have expanded to include new intervention methods such as improvisation, listening to music, or singing (Gardstrom et al., 2015). Art therapists have expanded the practice to other mediums such as sculpting, photography, or making collages (Thong, 2007). Generally, studies focus on the results of a group before undergoing treatment, directly after, and longitudinally. The vast majority of studies report overall improvements across cognitive and emotional domains for groups that receive art and music therapy. Specifically, art and music therapy have been shown to reduce short term symptoms of mental disorders as well as improve physical conditions and overall mood. These therapies also show longer term effects, such as in studies done over multiple months. The field of art and music therapy is still growing, and there are research methods, particularly in long term studies, that show promise to the evolution of the field. In summary, art and music therapy is an increasingly popular field that promises to improve the quality of life of many clinical groups.

References

1. (PDF) Art Therapy – A Review of Methodology. (n.d.). ResearchGate. https://www.researchgate.net/publication/304996838_Art_Therapy_-_A_Review_of_Methodology
2. Abbing, A., Ponstein, A., van Hooren, S., de Sonnevile, L., Swaab, H., & Baars, E. (2018). The effectiveness of art therapy for anxiety in adults: A systematic review of randomized and non-randomized controlled trials. PLOS ONE, 13(12), e0208716. <https://doi.org/10.1371/journal.pone.0208716>
3. Altenmüller, E., & Schlaug, G. (2015). Apollo's gift: New aspects of neurologic music therapy. Progress in Brain Research, 217, 237–252. <https://doi.org/10.1016/bs.pbr.2014.11.029>
4. American Art Therapy Association, Inc. - National Organization for Rare Disorders. (2022, August

- 11). National Organization for Rare Disorders. <https://rarediseases.org/organizations/american-art-therapy-association-inc/>
5. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Pearson.
6. APA PsycNet. (2024). <https://psycnet.apa.org/record/1993-38654-001>
7. Art Therapists Income and Hiring - BigFuture Career Search. (n.d.). [Bigfuture.collegeboard.org. https://bigfuture.collegeboard.org/careers/art-therapist/income-and-hiring#](https://bigfuture.collegeboard.org/careers/art-therapist/income-and-hiring#)
8. Art Therapy: Definition, Technique, Benefits, and Challenges. (2024, September 23). The Nestled Recovery Center. <https://thenestledrecovery.com/rehab-blog/art-therapy-definition-technique-benefits/>
9. Beard, R. L. (2011). Art therapies and dementia care: A systematic review. *Dementia*, 11(5), 633–656. <https://doi.org/10.1177/1471301211421090>
10. Career Search - BigFuture | College Board. (n.d.). Career Search - BigFuture | College Board. <https://bigfuture.collegeboard.org/careers/art-therapist>
11. Chandraiah, S., Ainlay Anand, S., & Avent, L. C. (2012). Efficacy of Group Art Therapy on Depressive Symptoms in Adult Heterogeneous Psychiatric Outpatients. *Art Therapy*, 29(2), 80–86. <https://doi.org/10.1080/07421656.2012.683739>
12. Davidow, J. (2018). Art Therapy, Occupational Therapy, and American Modernism. *American Art*, 32(2), 80–99. <https://doi.org/10.1086/699611>
13. Effa, C. J., Dolgoy, N. D., & McNeely, M. L. (2020). Resistance Exercise and Art Therapy on Body Image in Breast Cancer: A Scoping Review. *Women's Health Reports*, 1(1), 424–435. <https://doi.org/10.1089/whr.2020.0058>
14. García-Sánchez, S. (2017). *Understanding Sampling in Research*. Pressbooks.pub; Pressbooks. <https://slcc.pressbooks.pub/socialchange/chapter/understanding-sampling-in-research/>
15. Grebosz-Haring, K., Thun-Hohenstein, L., Schuchter-Wiegand, A. K., Irons, Y., Bathke, A., Phillips, K., & Clift, S. (2022). The Need for Robust Critique of Arts and Health Research: Young People, Art Therapy and Mental Health. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.821093>
16. Gussak, D. (2006). Effects of art therapy with prison inmates: A follow-up study. *The Arts in Psychotherapy*, 33(3), 188–198. <https://doi.org/10.1016/j.aip.2005.11.003>
17. Hirvikoski, T., Mittendorfer-Rutz, E., Boman, M., Larsson, H., Lichtenstein, P., & Bölte, S. (2016). Premature mortality in autism spectrum disorder. *British Journal of Psychiatry*, 208(3), 232–238. <https://doi.org/10.1192/bjp.bp.114.160192>
18. Hollander, E., & Burchi, E. (2019). Anxiety in Autism Spectrum Disorder. [adaa.org. https://adaa.org/learn-from-us/from-the-experts/blog-posts/consumer/anxiety-autism-spectrum-disorder](https://adaa.org/learn-from-us/from-the-experts/blog-posts/consumer/anxiety-autism-spectrum-disorder)
19. Hu, J., Zhang, J., Hu, L., Yu, H., & Xu, J. (2021). Art therapy: A complementary treatment for mental disorders. *Frontiers in Psychology*, 12(34456801). <https://doi.org/10.3389/fpsyg.2021.686005>
20. Iguina, M. M., & Kashan, S. (2021). Art Therapy. PubMed; StatPearls Publishing. <https://pubmed.ncbi.nlm.nih.gov/31747178/>
21. Ivanova, E., Panayotova, T., Grechenliev, I., Peshev, B., Kolchakova, P., & Milanova, V. (2022). A Complex Combination Therapy for a Complex Disease—Neuroimaging Evidence for the

- Effect of Music Therapy in Schizophrenia. *Frontiers in Psychiatry*, 13,795344.
<https://doi.org/10.3389/fpsyt.2022.795344>
22. Latkin, C. A., Edwards, C., Davey-Rothwell, M. A., & Tobin, K. E. (2017). The relationship between social desirability bias and self-reports of health, substance use, and social network factors among urban substance users in Baltimore, Maryland. *Addictive Behaviors*, 73(1), 133–136. <https://doi.org/10.1016/j.addbeh.2017.05.005>
23. Li, K., Weng, L., & Wang, X. (2021). The State of Music Therapy Studies in the Past 20 Years: A Bibliometric Analysis. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.697726>
24. Logue. (2024). What is music therapy? Approaches and benefits. *OHIO News*. <https://www.ohio.edu/news/2024/04/what-music-therapy-approaches-and-benefits>
25. McCaffrey, T., Edwards, J., & Fannon, D. (2011). Is there a role for music therapy in the recovery approach in mental health? *The Arts in Psychotherapy*, 38(3), 185–189. <https://doi.org/10.1016/j.aip.2011.04.006>
26. Miyatsu, R. (2019, April 25). Understanding your biases. *Psychological & Brain Sciences*. <https://psych.wustl.edu/news/understanding-your-biases>
27. Monti, D. A., Peterson, C., Kunkel, E. J. S., Hauck, W. W., Pequignot, E., Rhodes, L., & Brainard, G. C. (2006). A randomized, controlled trial of mindfulness-based art therapy (MBAT) for women with cancer. *Psycho-Oncology*, 15(5), 363–373. <https://doi.org/10.1002/pon.988>
28. Phelan, C., & Wren, J. (2006). Reliability and Validity. *Uni.edu*. <https://chfasoa.uni.edu/reliabilityandvalidity.htm>
29. Raglio, A. (2015). Effects of music and music therapy on mood in neurological patients. *World Journal of Psychiatry*, 5(1), 68. <https://doi.org/10.5498/wjp.v5.i1.68>
30. Raglio, A., Bellandi, D., Baiardi, P., Gianotti, M., Ubezio, M. C., Zancchi, E., Granieri, E., Imbriani, M., & Stramba-Badiale, M. (2015). Effect of Active Music Therapy and Individualized Listening to Music on Dementia: A Multicenter Randomized Controlled Trial. *Journal of the American Geriatrics Society*, 63(8), 1534–1539. <https://doi.org/10.1111/jgs.13558>
31. Regev, D., & Cohen-Yatziv, L. (2018). Effectiveness of art therapy with adult clients in 2018—What progress has been made? *Frontiers in Psychology*, 9(1531). <https://doi.org/10.3389/fpsyg.2018.01531>
32. Reviews. (1999). *Art Therapy*, 16(2), 89–95. <https://doi.org/10.1080/07421656.1999.10129675>
33. Salters-Pedneault, K. (2023, April 14). The use of self-report data in psychology. *Verywell Mind*. <https://www.verywellmind.com/definition-of-self-report-425267>
34. Smoller, J. W. (2015). The Genetics of Stress-Related Disorders: PTSD, Depression, and Anxiety Disorders. *Neuropsychopharmacology*, 41(1), 297–319. <https://doi.org/10.1038/npp.2015.266>
35. SVENSK, A.-C. ., ÖSTER, I., THYME, K. E., MAGNUSSON, E., SJÖDIN, M., EISEMANN, M., ÅSTRÖM, S., & LINDH, J. (2009). Art therapy improves experienced quality of life among women undergoing treatment for breast cancer: a randomized controlled study. *European Journal of Cancer Care*, 18(1), 69–77. <https://doi.org/10.1111/j.1365-2354.2008.00952.x>
36. Thaut, M. H., McIntosh, G. C., & Hoemberg, V. (2015). Neurobiological foundations of neurologic music therapy: rhythmic entrainment and the motor system. *Frontiers in Psychology*, 5(1185). <https://doi.org/10.3389/fpsyg.2014.01185>
37. The Modern History of Art Therapy in the United States. (2024). *Google Books*. <https://books.google.com/books?hl=en&lr=&id=WH8gCAAQBAJ&oi=fnd&pg=PR1&dq=junge+>

2010+art+therapy+veterans&ots=xLOC3DSrVr&sig=dz077mnC7wDBP1d0iFDHttvNJkw#v=onepage&q=junge%202010%20art%20therapy%20veterans&f=false

38. Wakim, J. H., Smith, S., & Guinn, C. (2010). The Efficacy of Music Therapy. *Journal of PeriAnesthesia Nursing*, 25(4), 226–232. <https://doi.org/10.1016/j.jopan.2010.05.009>
39. Zollman, C., & Vickers, A. (1999). ABC of complementary medicine: What is complementary medicine? *BMJ*, 319(7211), 693–696. <https://doi.org/10.1136/bmj.319.7211.693>