

# Art therapy for individuals with autism spectrum disorder and depression: effectiveness and future directions

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**Abstract.** This paper explores the effectiveness of art therapy as a form of psychotherapy to relieve depressive symptoms in individuals with autism spectrum disorder (ASD). Research has long indicated that individuals with autism are susceptible to developing mental health comorbidities, especially depression. Even though art therapy caters to the special needs of the neurodivergent population, and produces significant mental health benefits, past literature of art therapy and ASD has a primary focus on performance related outcomes. By reviewing relevant studies and research, this paper seeks to shed light on the potential therapeutic effects of art therapy for individuals with autism and comorbid depression. The advantages of art therapy over other common interventions, including cognitive behavioural therapy and mindfulness practices, are also discussed. Given the existing challenges in diagnosing and treating comorbid psychological conditions with ASD, such information is crucial in guiding practitioners to enhance the quality and effectiveness of both existing and future intervention strategies for this disadvantaged population.

**Keywords:** Art therapy; depression; autism spectrum disorder.

## 1. Introduction

### 1.1. The History of Art Therapy

According to the British Association of Art Therapists, art therapy is described as an approach to psychotherapy which incorporates visual and tactile forms of media to encourage the exploration, expression and communication of thoughts and feelings [1]. Unlike a regular art class, art therapy aims to enhance self-awareness, develop life skills, and, in some cases, address deficits and problematic behaviours. It can be beneficial for individuals of all ages and abilities, throughout various stages of life.

The utilisation of art for therapeutic purposes has a long history. However, the idea of blending psychotherapy with art was only formally adopted in the 1940s, by leading figures such as the American psychologist Margaret Naumburg and the English artist Adrian Hill. Publishing her ground-breaking work *Dynamically Oriented Art Therapy*, Naumburg was the first psychologist to employ art therapy, who believed that drawings by patients could be used to identify and treat mental health issues based on their unconscious feelings. As a professional artist, Hill used paintings as a therapy for himself during his mental and physical recovery from World War II, and shared his work with other patients. His 1945 book *Art Versus Illness* documented the birth of this field in England.

Drawing its foundation and inspiration from the theories and methods of Freudian psychoanalysis, art therapy was initially practised under two distinct theoretical perspectives [2]. The first was “art psychotherapy”, placing emphasis on the final artwork as well as the therapeutic relationship between the therapist, participant, and artwork. The other was “art as therapy”, centred around the therapeutic procedures of creating artwork. With academic and social development, contemporary art therapy has developed into a complex and multifaceted profession, based on a wide spectrum of theories and methodologies not limited to psychoanalysis and visual arts. The practice of art therapy is now contingent upon various factors, such as the audience, the setting, the theoretical frame of reference and the speciality of therapist.

## 1.2. Autism and Its Treatment

Autism spectrum disorder (ASD) is a neurological disorder that becomes apparent from birth, characterised by symptoms such as repetitive or compulsive behaviours, social difficulties, communication challenges, and sensory processing issues [3]. Traditional treatment approaches include behavioural approaches and social-relational approaches. Based on Applied Behaviour Analysis, behavioural approaches aim to reinforce positive behaviours and discourage negative ones, through a system of reward and consequence. One such method is Pivotal Response Training, which encourages the learning of “pivotal skills” that in turn lead to the learning of more skills. For instance, initiating conversation with others is one such “pivotal skill”, which promotes the development of communication and listening skills. On the other hand, social-relational treatments place emphasis on enhancing social skills and fostering emotional connections, often involving the participation of parents or peer mentors. For instance, the Relationship Development Intervention model incorporates activities that boost motivation, interest, and social interaction abilities.

However, in recent years, a wide array of alternative and supplementary treatments, including art therapy, become available. This is because in addition to displaying behavioural symptoms, individuals with ASD are also prone to developing coexisting mental health conditions, with depression being one of the most prominent comorbidities [4]. While art therapy has demonstrated specific mental health benefits for these individuals, existing literature tends to primarily focus on occupation-based outcomes [5]. Thus far, limited studies have assessed the usefulness of art therapy in improving the psychological well-being of individuals with ASD. This study aims to address this gap, focusing specifically on the impact of art therapy on depressive symptoms.

## 1.3. The Present Study

This paper seeks to consolidate existing research and explore the following inquiry: *Is art therapy effective in relieving depressive symptoms for individuals on the autism spectrum, compared to other common interventions?* Understanding this question will add to the limited knowledge of how depression impacts individuals with ASD, and how to address these depressive symptoms. Such information is crucial in guiding practitioners to enhance the quality and effectiveness of both existing and future intervention strategies. The significance of this research is further magnified by the Covid-19 global pandemic, which has heightened levels of anxiety and depression across the world, putting the neurodivergent population at higher risk. Additionally, existing challenges in diagnosing and treating comorbid psychiatric conditions in this population add to the value of investigating the potential benefits of art therapy.

## 2. Autism and Depression

As specified in the Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition; DSM-5), major depressive disorder (MDD), also commonly referred to as severe depression, is marked by a consistent and all-encompassing low mood, coupled with a reduced interest or enjoyment in activities one typically found pleasurable [6]. Individuals with ASD often experience stress and frustration due to the direct impact of their symptoms, or the indirect social impact of their symptoms. Indeed, studies on psychiatric comorbidity in ASD reveals elevated prevalence of depressive disorders, although these figures might be underestimated as depressive symptoms are often not recognized and remain undertreated [4].

Identifying MDD within the framework of ASD is particularly demanding due to the atypical manifestations of depressive symptoms in individuals with ASD. Individuals may no longer engage in their special interests, reduce the frequency of repetitive behaviours, or lose their ability to perform adaptive behavioural strategies and self-care techniques [7]. Furthermore, the autism spectrum bears a diverse range, where individuals could differ significantly in terms of functioning level and symptom expression [8]. In higher-functioning individuals, signs of depression are similar to those observed in the general population, as outlined in the DSM-5. However, identifying these symptoms

can still be difficult as most do not openly express emotions such as sadness, hopelessness, low self-esteem, or thoughts of suicide. Instead, these individuals tend to show flat or constricted affect, making it harder to detect changes associated with the presence of depression. On the other hand, lower-functioning individuals may display vegetative symptoms of depression. These may include incontinence, severe disruptions in sleep and appetite and sometimes, the outburst of aggressive behaviour.

Comorbid depression has profound emotional, social, and behavioural implications for individuals on the autism spectrum. It could exacerbate the already present psychological challenges linked to ASD, such as diminished social motivation and impaired adaptive functioning. It could also intensify physical symptoms and behavioural problems, leading to heightened functional impairments as well as increased medical and living expenses, placing additional burden on caregivers. Additionally, these symptoms can lead to substantial additional mental health burdens, including an increased risk of suicide. Identifying and attending to depressive symptoms in individuals with ASD are therefore critically important to prevent additional mortality [9]. Specifically, standardised assessments are necessary to support clinicians in this process. Further research is also necessary to gain a clearer understanding of how depression manifests across different age groups, genders, and cognitive abilities in this population, before developing a more individualised yet holistic intervention strategy.

### **3. Effectiveness of Art Therapy**

More than half of adolescents and adults with ASD experience alexithymia, meaning that they struggle to identify, name, and communicate their emotions [10]. Others may find it challenging to initiate, stay engaged or respond to conversations. This makes traditional forms of therapy, such as talking therapy, less practical. However, many individuals on the autism spectrum are visual thinkers, who can use art as a natural means to express their feelings and perceptions of the world. Thus, art therapy accommodates the unique needs of individuals with ASD, allowing for unrestricted expression that surpasses their verbal communication abilities.

Compared to other psychotherapies, art therapy is less structured and more flexible. As a constantly expanding and evolving field of study, art therapy has grown to adopt a wide range of theoretical approaches other than psychoanalysis, such as archetypal, cognitive-behavioural, and positive art therapy. Participants are also free to choose materials and methods that best suit them, such as painting, sculpting, or any other hands-on activities. While there is no standardised way of performing art therapy, it is generally agreed that art therapy is more than a session involving arts participation that leads to positive psychological outcomes. It has to be facilitated by a trained psychotherapist, employing art as the primary means of expressing intricate thoughts and emotions, complemented by verbal communication with the therapist. This approach fosters a collaborative environment between the participant and therapist, where feedback is incorporated throughout the process to enhance relationship skills [11].

Art therapy has the potential to bring about therapeutic changes in individuals with ASD experiencing depression. A systematic review showed that art therapy has the potential to enable psychological healing mechanisms by enhancing eight multidimensional positive goals and skills, such as communication, sensory stimulation, abstract thinking and innovation [12]. All of which could lead to the development of enhanced expression, improved recognition and representation of emotions, as well as effective coping strategies. Additionally, in line with the social-relational approach of treatment, group-based art therapy allows individuals with ASD to acknowledge and connect with others around them. By collaborating on a single piece of art, patients could gain insight into the perspective of others, fostering social interactions that ultimately help build self-assurance and emotional control.

However, there is a lack of literature examining the potential benefits of art therapy in assisting individuals manage and relieve depressive symptoms, especially for those on the autism spectrum. Current research on art therapy and ASD primarily focuses on performance related outcomes. For

instance, a recent systematic review investigated the treatment efficacy of art therapy, including other creative art delivery formats, such as music and theatre, for children with autism based on the Occupational Therapy Practice Framework: Domain and Process (4th edition) [5]. Almost all of the included studies employed a control group for the purpose of comparison, providing a strong evidence that artistic expressions in all forms enhances performance goals, such as social interaction skills. Additionally, all interventions seem to yield comparable positive outcomes, irrespective of an individual or group delivery setting.

Nevertheless, improvement in some occupation-based outcomes provide potential psychological benefits that can help individuals with ASD manage depressive symptoms. For instance, most studies utilised the Childhood Autism Rating Scale, where items such as relationship to people, emotional response, adaptation to change, fear and nervousness, communication and activity level are somewhat related to the psychological wellbeing of an individual. In other words, interventions, including art therapy, that aim to improve social skills might also help reduce depressive symptoms, even if they are not intended for such purposes. Indeed, a randomised study found that an 8-week structured group social and vocational skills programme resulted in lower Beck Depression Inventory-II scores for young adults with ASD [13]. During the programme, a one-hour weekly meeting was held among small groups of individuals. The curriculum followed a discussion-based structure, covering topics such as interpersonal relationships, social communication, and independent living. Group facilitators played a limited role by only introducing the topic and ensuring the session stayed on track, allowing group members to take the lead in discussions. Through sharing personal experiences, actively listening to others, providing feedback, and collaboratively devising problem-solving techniques, group members gained extensive knowledge while significantly improving their mental wellbeing.

Furthermore, there are various case studies supporting the use of art therapy in alleviating depressive symptoms. According to professional art therapist Jane Ferris Richardson, elder children and adolescents with ASD could discuss their creative processes when communicating with the therapist during sessions, which can be a healing experience in itself [14]. For example, one adult client described feeling "peaceful... like a wonderful sleep" while sketching and colouring a blue rose with concentric petals on a huge sketchbook. Another adolescent client, who had been diagnosed with MDD, found that art therapy offered tools and a special way to manage and overcome overwhelming thoughts and feelings. Indeed, using various art mediums provide a diverse array of sensory experiences, which can help the client integrate, capture and convey their feelings. This is particularly helpful for individual with ASD, who struggle with sensory perception and emotional regulation.

#### **4. Other Interventions**

Cognitive-behavioural therapy (CBT) is among the most popular behavioural therapies adopted by clinicians to reduce depressive symptoms in ASD, although its effectiveness has been studied to a limited extent. By assisting individuals in recognising and altering negative beliefs and behaviours, CBT is focused at improving the cognitive, social and psychological functioning of individuals. A nonrandomised study on group CBT demonstrated significant improvement in depression among young adults with autism, even at follow-up assessments conducted three and nine months later [15]. However, a recent review examining the effectiveness of CBT for individuals with depression and autism yielded inconsistent outcomes [16]. The review identified a total of seven studies, with five employing group CBT treatment, including the abovementioned study. Out of these five studies, two reported that CBT did not lead to a reduction in depression severity among individuals with ASD, with another revealing that depressive symptoms reverted to the initial baseline levels three months after the CBT intervention. The contradictory outcomes might be attributed to the heterogeneous study methodologies, ranging from single case study to open-label trial, as well as small sample sizes across different age groups. Current literature on CBT and depression in ASD is obviously lacking, with most interventions focusing on anxiety or aggressive behaviours, even though they are closely

associated with depression. Further research is warranted to improve the overall strength of evidence on CBT and ASD.

Additionally, a few studies have shown favourable outcomes for mindfulness-based interventions (MBI) in treating mental health problems, including depression, in adults on the autism spectrum [17]. This approach encompasses cultivating awareness of ideas, beliefs, emotions, bodily sensations, actions and reactions in the present moment, using a receptive and non-judgemental mindset. By engaging in meditation exercises such as breathing and relaxation, individuals learn to acknowledge their thoughts and emotions as transitory mental states without excessively analysing their causes. In a prior randomised controlled research using modified group MBI treatment, it was discovered that the intervention group experienced much less depression, anxiety, and rumination than the control study group [18]. The experiment involved a comparatively large sample of 42 higher-functioning adults with ASD for a training period of 9-weeks. Modifications were made to accommodate the characteristics of autism, through ways such as removing cognitive components of the training and minimising the usage of metaphors. On the other hand, research involving adolescents with ASD has a primary focus on reducing problem behaviours, such as aggression, through caregiver involvement, peer mentoring or individual and group training. Among these studies, none have reported on the outcomes of co-occurring depression and anxiety [19].

## 5. Discussion

Compared to art therapy, CBT might not be as practical for individuals with ASD. CBT often relies on individuals' ability to self-report and monitor their feelings based on their thoughts and behaviours. However, many individuals with autism struggle with social and verbal communication. CBT also utilises techniques that assume a high level of cognitive flexibility and the ability to adopt alternative strategies for interpreting information and situations. For many individuals with ASD, changing their methods of information processing and interpretation is challenging. Moreover, these individuals are known to favour predictability and routines, who are highly resistant to challenge their ingrained thought and behaviour patterns. While adaptations are often made to tailor the intervention approach towards these individuals, such as caregiver involvement, use of visual illustrations or concrete examples, and increased structure of sessions, the degree to which these modifications can aid the cognitive functioning of these individuals for effective CBT remain under-researched. Furthermore, executive functioning deficiencies in individuals with ASD may hinder them from planning, organising and completing CBT homework assignments post-session, which are integral parts of the treatment. Additional time and effort are also required for the therapist to understand and respond to the individual.

Similarly, compared to art therapy, implementing mindfulness-based interventions into the daily routine of individuals with ASD can be more challenging. Practises of mindfulness necessitate sustained attention from the individual by focusing on the present moment. Autism-related attention deficits will make it difficult for individuals to stay engaged and benefit from mindfulness exercises. Additionally, these individuals may engage in repetitive stimulation-seeking behaviours as a strategy for self-regulation, which makes it difficult to achieve many therapeutic goals of mindfulness practices, such as stopping and bringing in awareness. Instead, art therapy can take advantage of this repetitive behaviour and turn it into a restorative process, through various means such as filling and colouring shapes and patterns. Additionally, individuals with ASD often experience autistic burnout, where they become exhausted from everyday stressors. While increasing activity levels is a common approach to treating depression in neurotypical individuals, such as incorporating mediating exercises into daily activities, it may however exacerbate burnout in these individuals.

Art therapy itself is not without limitations. Firstly, while art therapy may help individuals with ASD to freely express themselves and cope with overwhelming emotions during therapy sessions, transferring these skills and coping mechanisms to real-life situations outside of therapy may be especially difficult. Furthermore, locating a trained art therapist who is also professional in

communicating effectively with individuals with ASD can present practical and financial difficulties due to the scarcity of resources and limited availabilities of art therapists in many countries. Establishing a suitable match between the individual and therapist can also be a challenge. Given that individuals with ASD often possess unique and unconventional ways of expressing themselves both verbally and visually, it is crucial for therapists to accurately analyse and understand the clients' thoughts and emotions during their art-making process, thus avoiding misunderstandings and developing a therapeutic relationship for effective treatment.

Over the years, in minimising the limitations and maximising the strengths of different intervention strategies that address mental health issues, scholars and practitioners have integrated art therapy with complementary approaches. One such example is the cognitive-behavioural art therapy (CBAT). CBAT was established by several therapists who incorporated CBT principles, such as mental imagery, problem-solving and modelling into their practice. It offers clients a practical and flexible coping strategy that can be applied to real-life situations outside of therapy setting. Another example is the mindfulness-based art therapy (MBAT). By combining MBI and art-making, MBAT aims to help individuals bring awareness to their present thoughts and emotions using art materials. This could potentially benefit individuals with ASD, who may struggle to stay focused in meditation exercises without external visual or tactile aids. During the art-making process, individuals could learn to become more conscious of their own reactions and behaviours to the feelings that they uncover and experience.

However, evidence-based research on most of the integrated intervention strategies is very limited, with almost no study looking into their potential benefits for individuals with ASD. Furthermore, many such strategies target a specific mental health issue other than MDD. For instance, the dialectical behavioural art therapy has only been studied as an approach that addresses the difficulties of living with borderline personality disorder. In order to further establish the effectiveness of art therapy for individuals with autism and depression, more research is needed. Future studies should explore the direct benefits of art therapy on depressive symptoms and psychological well-being, employing validated assessment measures specific to individuals with ASD. By expanding the evidence base, scholars and practitioners can better understand the role of art therapy in supporting the mental health needs of individuals with ASD and develop targeted interventions that address their unique challenges. Moreover, as Martin (2009) rightly pointed out more than a decade ago, the study of art therapy and ASD needed more substantial quantitative data, the use of comparison group or wait list control group, a more diverse range of participants in terms of age, sex, socioeconomic and educational backgrounds, outcome-based studies, cohort studies, and replications to enhance the scope and reliability of findings.

## 6. Conclusion

In conclusion, even though depression is a prominent comorbidity in individuals with ASD, its diagnosis can be challenging due to atypical or diverse symptom expression. Besides improving performance related outcomes, art therapy has also shown promise as a valuable approach for addressing the mental health difficulties experienced by individuals with ASD, especially in relation to depression. It taps into their visual thinking abilities, releasing their thoughts and emotions before providing them with a natural and unrestricted means of self-expression. Relying on diverse theoretical frameworks and methodologies, art therapy is a flexible tool. It helps therapists develop customised approach that caters to the individual's unique sensorimotor, emotional and social needs, taking into consideration the broader context of family and community. Future treatments for individuals with autism and depression could combine art therapy with complementary intervention strategies to develop a more holistic approach, which not only enhances the positive and meaningful experience of art-making, but also takes advantage of the final art product as well as the therapeutic relationship between the artwork, participant and therapist. Do not number your paper: All manuscripts must be in English, also the table and figure texts, otherwise we cannot publish your

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