

Systematic Literature Review of Art Therapy Interventions for Children with ASD by Shruti Arvind

Abstract

Autism Spectrum Disorder (ASD) is a neurological developmental condition that involves difficulties with communication, repetitive behaviours, elevated or reduced sensory responses, and challenges in managing emotions. Art therapy (AT) is a treatment method that allows people to express feelings and ideas in a non-verbal way. AT uses materials such as paint, clay or drawing and is especially useful for children with ASD as it supports creativity, mindfulness, flexibility and social interaction. This Systematic Literature Review (SLR) examined 16 peer-reviewed studies focusing on art therapy and art-based interventions for children with ASD. Across studies, art therapy appeared to create a non-threatening environment that allowed children with ASD to express themselves more freely than interventions with language or more structured formats. While the research indicates that art therapy has the potential to help children with ASD to better express themselves, the evidence available is still subjective and limited. Many investigations are experimental in nature and rely primarily on subjective observations rather than quantitative assessments. This paper recommends that future research should concentrate on creating better quantitative evaluative criteria as well as study the impact of AT on children with ASD over a longer period of time to see if the early benefits of AT continue to benefit the children. In addition, the paper recommends that developing a structured art therapy toolkit that helps children with ASD develop both emotional and behavioural skills may be beneficial.

Introduction

The American Psychiatric Association (APA) defines Autism Spectrum Disorder (ASD) as “a neurodevelopmental disorder marked by persistent challenges in social communication and interaction AND restricted, repetitive forms of behaviour, interests, or activities, with symptoms showing early in life and affecting daily functioning (2013). It is called spectrum because symptoms and severity vary widely.” Anxiety and stress management are common concerns with children with ASD with a possible worsening of symptoms in adolescence (White et al., 2009). Recent data from the American Centre for Disease Control (CDC) shows that more than 3% of children are affected by ASD, making it one of the most common developmental disorders. Due to the range of symptoms in ASD and the difficulties in verbal communication, traditional therapies have limitations which makes the need for other forms of therapeutic intervention more urgent.

Children with ASD often face difficulties expressing their emotions or understanding the emotions of others. At the same time, these children appear to have relative strengths in visual processing, making art therapy a promising therapeutic approach to develop flexibility, self-esteem and communication (Evans & Dubowski, 2001). Mindfulness based art interventions have been found to support emotional expression, sensory processing, and psychological wellbeing (Martin, 2009; Schweizer et al., 2014). Research using frameworks such as the Context Outcomes Art Therapy (COAT) suggests that art therapy may help reduce social communication difficulties and repetitive behaviours (Schweizer et al., 2014).

Research shows that Art Therapy (AT) may improve emotional regulation, communication, and social interaction. Joint sessions involving both parents and children appear to improve emotional connection and engagement (Moon, 2012). However, there appear to be many limitations to these studies - for example, Kaimal & Ray (2016) rely on observational surveys with no control group. While many studies appear to show possible benefits of AT, it is not very evident how art therapy actually helps children with ASD or which specific parts of AT work best. In addition, standardized tests such as Autism Diagnostic Observation Schedule (ADOS) have limitations as they depend on the skill of the examiner and cannot be used without understanding the full medical history and behaviour of the child (Lord et al., 2000). Short, intensive interventions may be less effective, as seen in a study in the Kurdistan Region of Iraq with ASD Levels 2 and 3, showing the importance of a therapist's experience and the need for longer duration of studies (Abdulah et al., 2023).

Significance

Emotional regulation is a critical skill that is required to function in society. It helps us manage emotions, build relationships, solve problems jointly and achieve goals. But this crucial skill is often not present in children with ASD. Art based mindfulness therapies offer an accessible, nonverbal approach to develop these skills, especially for those who may struggle with verbal interventions. This study aims to identify the best practices for supporting children with ASD while understanding the conditions under which art therapy is most effective - such as duration, therapist role, involvement of family and personalization.

Methods

This literature review dealt with peer reviewed studies focusing on art therapy and arts-based intervention for children with ASD. The databases used for research included PubMed, ScienceDirect, Taylor & Francis, SAGE Journals, and others. Studies were chosen based on their focus on therapy related to motor skills, communication, social interaction, and emotional regulation. Both qualitative and quantitative research were studied to provide a comprehensive overview. Keywords used in the search included autism spectrum disorder, art therapy, mindfulness-based intervention, communication, motor skills, and social skills therapy.

A literature review matrix was used to organise and compare the selected studies. Each study was analysed based on key characteristics such as author name, year of publication, purpose of the study, methodology used, key findings, limitations and areas of further study. This enabled a study of all the papers to understand common patterns, unique findings, limitations and areas of further investigation. Based on this matrix, the literature was organized into themes: motor development, communication, social interaction, and emotional regulation. This thematic approach allowed for identification of trends, patterns, and research gaps, providing a nuanced understanding of the effectiveness of art-based interventions for children with ASD.

Motor Skills

Children with autism struggle with complex instructions and developing motor skills depending on the level of severity. Deleon (2024) advocated for the use of art therapy for improving motor skills as it helps develop fine motor skills, which are important for everyday tasks like writing, dressing, and using tools. Chincholkar et al. (2019) conducted a prospective cohort study on 9 children over 2 months to map the improvement in motor skills with art based intervention based on embodied cognition. Using the Vineland Social Maturity Scale (Locomotion subscale), the study showed an increase in locomotion scores though the sample size was not large enough to be meaningful. In an experimental study by Abdulah et al. (2023) no improvement in motor skills was noted in a 11 session art therapy intervention. It is important to note that in papers by Chincholkar et al. (2019) and Abdulah et al. (2023), small sample size and short duration (1- 2 months) were common limitations. Future studies need to include a larger stratified sample mapped over a longer period of 3-6 months at least to better understand whether these therapies have long lasting benefits.

A promising study to be mentioned is by Keshirim (2024) which created an intervention that included creative tasks that required precise hand movements, such as cutting and pasting shapes, colouring, and working with different types of textures and colours. This study used two new types of exercises – sculpture and clay modelling as well as photography and digital art. These activities were designed to strengthen fine motor skills and help sensory development through exploration of different materials enabling participants to explore areas like three dimensional skills and the use of digital tools. In addition, this study involved engaging children with one of their parents. It was unique because it helped parents understand how to use art to communicate with their children. The impact of parental involvement was noteworthy and future work of a larger sample size could consider the inclusion of parents.

Communication

Children with autism spectrum disorder (ASD) struggle with verbal and non-verbal communication. In severe cases, the children are non-verbal. Several studies suggest that art-based and creative arts therapies provide an alternate form of communication by reducing reliance on language and using symbolic, visual and bodily movement. Tang's (2023) study on expressive art group therapy in a joint parent-child setting demonstrates how joint activities such as art-making, can improve communicative interaction between parents and children by helping parents better recognise and interpret their children's expressions. This approach is especially relevant for children with severe autism who are mostly non-verbal or minimally verbal.

According to reviews by Zhou et al. (2024) and Deleon (2024), art therapy may improve social and communication skills in children with ASD. Art therapy creates a calm, supportive non-judgemental environment which seems to help children, especially those who are non-verbal, express themselves better. The reviews also show that art activities done along with family members seem to improve social interaction and strengthen the relationship between parents and their children.

The scoping review by Bernier et al. (2022) shows how creative arts activities such as drawing, painting, music, and theatre appear to improve communication and social interaction skills in children with autism, based on the Occupational Therapy Practice Framework (OTPF-4). Moo and Ho (2024) show that Creative Arts Therapies (CATs) help children with autism communicate in non-verbal ways and improve interaction between parents and children. The review explains that therapists can further help improve communication within families through shared creative activities.

Overall, these five studies suggest that art-based therapies may help improve communication in children with ASD (especially non-verbal) as well as improve parent-child communication. However long-term studies and deeper research are required to confirm these benefits. The use of more standardised methods of measurement and long term follow up to study their effectiveness will also enhance the quality and suitability of the findings.

Emotional Regulation

Controlling emotions is one of the biggest challenges faced by children with Autism Spectrum Disorder (ASD). Deleon's (2024) paper states that art-based therapies, such as drawing, painting or playing with clay, can help children express themselves in a calmer way. The study specifically notes that the textures of materials like clay may help calm children. Kesherim (2024) and Zhou et al. (2024) also share similar findings and state that art therapy helps children regulate their emotions and allows them to name and express their feelings that they find difficult to verbalise. Gulati et al. (2024) add that art therapy helps children turn emotions into physical forms like paintings or sculptures, enabling therapists to understand their feelings better. Finally, the review by Bernier et al. (2022) shows that creative forms of art therapies such as music, drama, and theatre can also support emotional regulation in children with ASD with music reducing stress even after short sessions.

While these papers indicate that art therapy helps in emotional regulation, the rigour of the studies make it difficult to establish a definite linkage. Most of the studies use small samples, subjective parameters and use studies that are not very well designed. The studies are also mostly observational, making it difficult to make any conclusions about the long-term effectiveness of art therapy.

Social Skills

The five studies explore how art therapy can support the development of social skills in children with autism spectrum disorder (ASD). The papers all indicate that art therapy provides a safe, low-pressure environment where children can practice social interaction without relying heavily on verbal language which many children with ASD find difficult. Tang's (2023) study shows the benefits of parent-child therapy allowing children to better express themselves while also helping parents understand their children better. The study also notes that a group setting allows a less stressful space for children to practise their communication skills.

Vogel et al. (2024) focuses on visual art therapies such as painting, drawing and clay work and Akridge's (2021) paper studies creative art therapy including music and drama. These studies show that these therapies help children with ASD practice patience, turn-taking, collaboration, and understanding social cues. Moo and Ho (2024) also emphasise the importance of family-focused arts therapies, showing that when parents are involved, children's social engagement improves and in addition improves their relationship. Chincholkar et al. (2019) also supported the other studies and found improvements in social skills such as imitation, relating to others, and communication.

All five studies share similar limitations such as reliance on small sample sizes, short intervention periods, and non-experimental designs, making it difficult to draw strong conclusions. Many of the measurements were observational without quantifiable metrics and long-term follow-up was not available.

Discussion and Conclusion

Research into art therapy notes that while it does have an important effect on a number of areas in children with ASD including social skills, communication, emotional regulation and motor skills. However its role is supportive rather than providing a direct solution to their specific needs and problems. Most of the research studied does not demonstrate dramatic improvements. Rather it indicates that, when children are placed in a stimulating environment which is free from the pressures of everyday life, it allows for their natural creativity and expressive abilities to flourish without judgement or insecurity.

It was noted across studies that children seem more at ease in activities involving art compared to those with language or structured format. Research into children with ASD shows that small improvements can be made such as their ability to sit at a particular task for a longer period and being more involved with their parents or more interactive during family activities. For children who usually have problems with social relationships, even these slight changes are beneficial.

Several research studies, including theses and articles, have discovered that, from the view of emotional management, the sensory experiences with the creative art process have a positive, calming change on young children's emotional well being. Creative activities such as painting, music and dance allow emotions to be expressed without talking. However, these conclusions are mostly based on short term observational studies, rather than study the sustained benefits outside of therapy sessions or over a longer period of time. Research into the area of motor skills yields mixed results. While some research studies have found improvements in fine motor skills, other studies have failed to detect any clear improvements. This may be due to the limited treatment period and small sample size. The time necessary for some aspects of motor skill improvement may well be greater than the time provided during the studies.

While the research so far shows that art therapy has some promise in helping children with ASD, the current evidence available is limited. Many investigations are experimental or qualitative in character and rely on observations over quantifiable end results. It is hard to make any confirmable claims about their effectiveness. More extensive and longer-term studies into art therapy are needed if its potential is to be fully understood.

Future Directions

Further research should concentrate on programmes running over a longer period of time, thus giving enough time for real changes to occur and to see if the initial improvements can be sustained. Developing an art therapy toolkit that concentrates on both emotional and behavioural skill rather than clinical outcomes alone could be one direction taken.

A potential study could deal with a three-month programme for 8 to 14 year old children studying in India. Creative art exercises guided by licensed therapists could be used to encourage children to learn acceptance, patience, non-reactivity and learning to let go. An open ended learning process without goals could reduce the pressure on children with ASD who are prone to being very sensitive. To help in this potential study, the author has created a toolkit to conduct research on a larger sample size and conduct observations before and after interventions.

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