

Art therapy for children with autism spectrum disorder


Arteterapia dla dzieci z zaburzeniami ze spektrum autyzmu

Student Scientific Association of Psychology at the Department of Psychology, Faculty of Medicine, Medical University in Lublin, Poland

Correspondence: Julia Lipska, Student Scientific Association of Psychology at the Department of Psychology, Faculty of Medicine, Medical University in Lublin, 20-093 Lublin, Poland, e-mail: julka98712@gmail.com

ORCID iDs

1. Julia Lipska  <https://orcid.org/0009-0009-4093-2543>

2. Klaudia Karina Leś  <https://orcid.org/0009-0007-9357-5573>

Abstract

Aim: Presentation of the forms of art therapy most commonly used in children with autism spectrum disorder, including their short descriptions, possible ways of working, desirable benefits and impact on children and their parents, as well as an outline of other existing forms of art therapy for children. **Materials and methods:** In June 2023, we searched through the PubMed and Google Scholar electronic databases. **Thesis:** There are many forms of art therapy, the most common being music therapy, dance/movement therapy, visual therapy, cinema therapy, and theatre therapy. They have one common aim: if they are successful, they help individuals with autism spectrum disorder to communicate and express their feelings through art, as well as decrease their depression and anxiety levels, and increase relaxation. Usually, the therapy works through mirroring other people's behaviours, focusing the individual's emotions on art and understanding body movements and gestures of others as well as the patient's own. **Conclusion:** Art therapy may improve social skills in children with autism spectrum disorder, help them externalise their feelings, and have a positive impact on their mental health by decreasing the severity of negative symptoms. It helps them communicate, understand themselves and others, and focus their emotions on their interests and hobbies.

Keywords: children, autism spectrum disorder, art therapy

Streszczenie

Cel: Prezentacja najczęściej stosowanych form arteterapii (terapii sztuką, arteterapii) dla dzieci z zaburzeniem ze spektrum autyzmu, z uwzględnieniem ich krótkich opisów, możliwych sposobów działania, korzyści oraz wpływu na dzieci i ich rodziców, a także wymienienie innych istniejących form terapii sztuką dla dzieci. **Materiał i metody:** W czerwcu 2023 roku autorki przeszukały elektroniczne bazy danych PubMed i Google Scholar. **Teza:** Istnieje wiele form terapii sztuką, z których najczęściej stosowane to: muzykoterapia, terapia tańcem (inaczej: choreoterapia) czy też ruchem, terapia wizualna (plastyką, rysunkiem), filmoterapia i terapia teatrem (dramaterapia). Mają one wspólny cel główny, ponieważ jeśli są skuteczne, pomagają osobom z zaburzeniem ze spektrum autyzmu komunikować się z otoczeniem oraz wyrażać swoje uczucia poprzez sztukę, zmniejszając przy tym depresję u pacjentów i ich lęki, a także zwiększając poziom odstresowania. Zazwyczaj działa to poprzez odwzorowanie zachowań innych, skupienie emocji jednostki na sztuce oraz rozumieniu ruchów ciała i gestów innych osób, a także samego pacjenta. **Wnioski:** Arteterapia może poprawić umiejętności społeczne u dzieci z zaburzeniem ze spektrum autyzmu, pomaga im uwewnętrznić swoje uczucia oraz ma pozytywny wpływ na ich zdrowie psychiczne, poprzez zmniejszenie negatywnych objawów. Pomaga im komunikować się, zrozumieć siebie i innych, a także skupić emocje na zainteresowaniach i hobby pacjentów poddanych terapii sztuką.

Słowa kluczowe: dzieci, autyzm, terapia sztuką

INTRODUCTION

Autism is one of the neurodevelopmental disorders that is most commonly diagnosed in childhood. It is characterised by difficulties in social relationships, verbal and nonverbal communication, and the presence of repetitive behaviours or interests (Waś et al., 2011). This cluster of deficits is referred to in the literature as the autistic triad or autistic triad of impairments. Autistic children may exhibit difficulties in maintaining eye contact, qualitative impairments in speech development, avoidance of physical contact, lack of behavioural differentiation towards parents and strangers, and a lack of interest in engaging with peers. In addition, children with autism dislike changes in their environment, often engage in repetitive and stereotyped play, and are reluctant to try new things. They may demonstrate special interests or become fixated on specific topics. There also engage in repetitive movement patterns, aimed at self-stimulation, such as spinning in circles, rocking, toe-walking, or rubbing hands against surfaces (Stasiak, 2018). The exact causes of autism spectrum disorders (ASD) have not been definitively determined, but current understanding suggests that neurobiological factors, including genetics, play a predominant role in its aetiology. Autism affects boys approximately four times more frequently than girls, which may be associated with mutations on the X chromosome, occurring in males in only one copy (Skawina, 2016). The approximate prevalence of the condition is one in 100 children (polskiauityzm.pl), which means that it could affect up to 380,000 individuals in Poland alone. Diagnostic difficulties are associated with the high heterogeneity observed within the autism spectrum disorder group (Gałecki et al., 2018). Each affected individual exhibits slightly different autistic traits, and they may also vary in severity. Differences between individuals can sometimes be very subtle, making it a significant challenge for diagnosticians to establish rigid boundaries between different types of dysfunction. Unfortunately, this problem is not only administrative but also clinical, because an accurately determined diagnosis allows the implementation and prompt initiation of appropriate therapy. Properly selected treatment is crucial for the patient's future functioning and independence (Chojnicka and Płoski, 2012). Additionally, the diagnostic process itself poses challenges. It is based on a set of detected symptoms, relying on the observation of the child. Unfortunately, many childhood behaviours are ambiguous or variable over time, making it difficult to determine whether we are dealing with a manifestation of the disorder or a variant of normalcy (Waś et al., 2011). In view of the complexity of the problem, a diagnostic team consisting of a paediatrician, child psychiatrist, psychologist, and speech therapist is required to establish a diagnosis (Waś et al., 2011).

ASD is believed to be an untreatable disorder, and proper personalised and continuous therapy is crucial for patients to facilitate their gaining social and communication skills. There are several existing and widely accepted techniques to rehabilitate autistic children. One of the most interesting modalities

is art therapy. It is commonly used by therapists worldwide based on its proven positive effects on patients. Art activities have been shown to reduce hyperactivity or inattention and simultaneously encourage children to cooperate, communicate, solve problems, and evaluate their own behaviour (Alter-Muri, 2017; D'Amico and Lalonde, 2017). In addition to visual therapy (art, cinema, theatre), psychotherapists frequently reach for music or dance therapies. These interventions help patients regulate their mood and affect them in positive ways by reducing pain, stress, and anxiety (Stegemann et al., 2019).

This narrative review was undertaken with the aim of summarising and gathering artistic interventions which could be useful in ASD therapy. The authors focused on the latest research to isolate methods with proven positive effects on patients' mental health and social skills.

MATERIALS AND METHODS

In June 2023, a literature search was performed for the purpose of conducting this systematic review. The authors searched through the PubMed and Google Scholar electronic databases. Only these two databases were used, as the goal was to search the most accessible journals and search engines. No article types were excluded. No particular language was set. The keywords used were: "art therapy OR music therapy OR dance therapy OR painting therapy OR cinema therapy OR theatre therapy + autism spectrum disorder + children". On Google Scholar, no particular language was chosen, the results were sorted by accuracy, and no specific type of study was picked. The keywords were the same as in the PubMed database.

Inclusion criteria:

1. descriptions or results of art therapy in children with autism spectrum disorder.

Exclusion criteria:

1. articles focused on youth or adults only;
2. articles about art therapy outside the autism spectrum disorder.

No restrictions to a particular sex, ethnicity etc. of the individuals described in the publications were set.

RESULTS

In order to adapt to the requirement of no more than 30 references included in the publication, a total of 29 articles were identified and synthesized in this review. Articles found on Google were included as well, as they addressed the outlook of the people not necessarily from the medical world but a more casual one.

DISCUSSION

Music therapy

One of the most popular forms of art therapy is music therapy. It has been applied in ASD treatment since the early 1950s

(Geretsegger et al., 2022). Since the first person was diagnosed with autism in 1943 (Sharda et al., 2019), it can be recognised as one of the oldest and longest-running forms of therapy, as it is still used nowadays. Overall, it relies on experiences with music provided by a trained therapist (Rabeyron et al., 2020) who can utilise the pre-linguistic musical features of time, that is rhythm, different form – meaning sound, and intensity – that is dynamic, depending on the individual's needs (Mössler et al., 2020). Later on, the individual can talk about their own feelings attached to the music and the meaning of it. As with every form of art therapy, it is supposed to help children communicate, as difficulties in communication are the core problem of their disorder. When successful, it also increases the individual's self-awareness and the ability to share emotions (Mössler et al., 2020). Rabeyron et al. (2020) in their study concluded that music therapy and its psychotherapeutic dimensions produced more effective results than listening to music alone. There are also reports claiming greater or smaller efficacy of music therapy in helping individuals with dementia, depression, insomnia, and schizophrenia (Gassner et al., 2022). In children with ASD, those with low levels of cognitive functioning or individuals who are non-verbal, as well as children younger than five years, are the most likely to benefit from this kind of therapy (Sharda et al., 2019), although some authors claim that art therapy is most commonly used in adolescents over 13 years of age (Wypyszyńska et al., 2021). Even the researchers claiming there is no neuroscientific evidence supporting the benefits of music therapy in children with autism agree that it may improve some domains of their lives, for example parent-reported social communication or intrinsic brain connectivity in school-age children, therefore making it a useful supporting tool in therapy (Sharda et al., 2018). In the same study, Sharda et al. (2018) found that music therapy in comparison to non-music therapy increased functional connectivity between bilateral primary auditory cortex and subcortical and motor regions that are often impaired in ASD. They also pointed out a reduced over-connectivity between auditory and visual-association areas. Ren et al. (2022) gathered evidence showing that music therapy also improves the patients' language skills and self-confidence, and that among many forms of therapy available for children with ASD, music therapy might be one of the most effective methods. Overall, promising positive effects have been shown in children with ASD in many domains, but the high heterogeneity of autism requires further studies to promoted the development of more targeted and effective forms of music therapy (Sharda et al., 2019).

Dance/movement therapy

Another kind of art therapy is dance/movement therapy. Although it may not be as popular as music therapy, it definitely plays an important part in helping children with ASD to communicate. It has a long-established status as

a therapeutic modality, as already in the 1960s an American therapist Bethkalish Weiss was successfully researching the psychodynamic personality and motor behaviour in autistic children (Ren et al., 2022). DeJesus et al. (2020) reviewed study results, showing that dance/movement therapy can decrease negative symptoms in children with ASD as well as improve psychological well-being and social skills, thus increasing the ability to share their emotions and improve independence in terms of daily living tasks. It is also known to increase the level of body awareness and self-other awareness, and improve social skills (Shuper Engelhard and Vulcan, 2021) that, as mentioned above, are the core problem in ASD. In addition, it plays an important role in improving cognitive functions in individuals. When successful, it might also decrease anxiety, relieve pain, and increase relaxation. Dance movement therapy might help reduce the distinctive body movements in children with ASD, and when also performed in the parent-child relationship, it can bring beneficial effects in the patient's body rhythm (Ren et al., 2022). All in all, dance or movement therapy relies on the understanding and interpretation of the gestural movement that can ultimately lead to using the body as a tool to a successful communication by using mirroring or synchronization (DeJesus et al., 2020).

It is also worth mentioning that during the COVID-19 pandemic this kind of treatment was difficult or even impossible to use, as direct contact between individuals with ASD and specialised therapists was not allowed in most countries. This is when the so-called "tele-dance movement psychotherapy" rose in prominence. It might still not be widespread enough, but Moo and Ho (2023) summarised the benefits and challenges associated with this form of therapy. They pointed out the necessity of further studies, but noted that dance therapy practised in this form might be still beneficial and needed during social distancing or when the individual is unable to participate in regular sessions due to geographical factors. Nevertheless, it may be challenging for some individuals, for example due to the lack of will to participate in screen-to-screen interaction (Moo and Ho, 2023).

Painting and drawing therapy (visual therapy)

Another example of creative art occupations used as a therapy in children with ASD is painting and drawing. Most authors agree that painting allows children with autism to express themselves and communicate in an indirect way (Bernier et al., 2022). Proposed exercises include painting themes from their life, such as drawing people (e.g. family members), animals, landscapes, and daily life scenes. Tools vary from paper and crayons or pencils to paints and water or even own saliva, as the part of therapy involves exploring the range of possible materials. Progress is noted when children are willing to talk about their work and share their art experiences. Researchers have also noticed that children

tend to improve their eye contact and are willing to draw at home, and they improve their communication skills and social behaviour both at home and school. Children are able to cope with their anger and anxiety better, have a more flexible behaviour, and their learning skills improve (Bernier et al., 2022). There are many different ways to provide painting therapy. In addition to painting activities during therapy sessions, at home or during art courses for children with ASD, there is also a method called “parent–child painting” or “parent–child art therapy”. This kind of therapy is becoming more and more prevalent, with researchers suggesting that it encourages both the parent and child to express their feelings, unconscious fears, desires and memories, therefore reinforcing the bond between the parent and the child. It allows expanding the parents’ understanding of their children and helps them develop a more reflective awareness of life experiences (Bitan and Regev, 2022). According to art therapists, art therapy can improve the relationship between parents and children, but it needs to be considered individually and by taking the sensory profiles into account (Bitan and Regev, 2022).

Cinema and video therapy

Over the years, there have been discussions about the importance of representation in the cinema. Films, especially the popular ones, may be an important tool to educate people, as they are an accessible and usually not very demanding source of information. For years, filmmakers have been reaching for people with ASD as the main protagonists of films or TV series. Examples of such popular productions include “What’s Eating Gilbert Grape” (1993, with critically acclaimed Leonardo DiCaprio’s role as an autistic 18-year-old), “Temple Grandin” (2010, based on a true story of an autistic American academic and animal behaviourist) or “Loop” [2020, an animated short film focusing on a non-verbal autistic girl, Renee, voiced by Madison Bandy, who herself is primarily non-verbal and autistic (My Autism, American Autism Association, 2021)]. Apart from the representation of autistic people, the cinema can also serve as a therapeutic instrument. The available types of cinema therapy include traditional cinema therapy (also known as classical cinema therapy) and video modelling (Sacilotto et al., 2022). Cinema therapy is often considered as synonymous to film therapy, but Saladino et al. (2020) propose to differentiate these two kinds of treatment, with “cinema therapy” encompassing the replication of the visual and environmental characteristics of the cinema, making the patients feel like they are inside a movie theatre, and “film therapy” referring to the use of films themselves and their plots, adopting situations and repertoires of characters with which the patients can identify. In traditional cinema therapy, an individual, either alone or with specifically selected people, watches a commercial film that, according to the therapist, is somehow related to the patient’s difficulties. Later, the two discuss the main themes addressed in the film

(Sacilotto et al., 2022). The patients need to be informed why a specific film was chosen, so the important topic is not missed out, and it should help the patient find a solution to their problems (Sacilotto, 2023). Talking about films can encourage individuals to externalise their problems and feelings if they recognise themselves in a specific character (Sacilotto et al., 2022). Video modelling, on the other hand, either exposes children to film characters manifesting specific skills that the patient needs to learn or involves children watching videotapes showing positive examples of adults or peers. Another available option is the so-called “video self-modelling” which consists of children watching the video material of themselves while being engaged in a desirable behaviour (Saladino et al., 2020). The studies show that cinema and video therapy indeed has a positive impact on children with ASD, helping them, for example, to acquire new conversational skills and generalise them to other contexts, learn to address correct responses for helping behaviours and to extrapolate responses to other situations – or show significant increases in target social skills and a significant decrease in problem behaviours following video modelling therapy (Sacilotto et al., 2022). Yet another kind of therapy is therapeutic filmmaking which encourages patients to express their feelings by creating their own videos. The underlying intention is to make the self-narrative process easier for a person with ASD (Saladino et al., 2020).

Theatre therapy

A similar, yet still not thoroughly explored, kind of art therapy is theatre therapy, also known as psychodrama (drama) therapy. It consists in improvisational performances that are not scripted or precisely planned (Maas, 2021). It resembles the experience of acting in theatre, including elements of role play, social interaction, and observing behaviour in others (Corbett et al., 2019). It remains unclear what specific aspects of theatre contribute to the observed changes in social cognition and behaviour, but the inclusion of acting techniques and reciprocal role play provides a natural foundation for building social skills in a less structured therapeutic setting (Corbett et al., 2019). Individuals with ASD themselves recalled improvisational theatre therapy as a source of decreasing anxiety and increasing social skills (Maas, 2021), and it seems to be one of the most beneficial tools in improving patients’ speech skills (Wypyszyńska et al., 2021).

Others

Other therapeutic options include creative writing, textile arts and crafts, as well as mixed therapies, e.g. combined dance movement and music treatment (Ren et al., 2022) that seem to be more beneficial than any one form in isolation (Wypyszyńska et al., 2021). Elbeltagi et al. (2023) conducted a study of play therapy, with play understood as a pleasurable activity in which children have fun and are

process-oriented, yet still engage spontaneously. The authors concluded that despite weak evidence this form of therapy might be effective in the treatment of children with ASD. Initially, we wanted to include these forms of art therapy in our review, but ultimately they were excluded. Probably due to these methods being less popular than the ones described in detail above, not enough reliable data has been found to include them in the scope of this review.

CONCLUSION

There are many available forms of art therapy, including music therapy, dance movement therapy, and play therapy. Art therapy is one of the oldest and longest-functioning therapeutic modalities for children with ASD. Different types of art provide different therapeutic benefits, but all should have a common therapeutic effect, namely improving the social skills in children with ASD. Most studies show a high percentage of successful art therapy cases, with parent-reported improvements in social skills or individuals' themselves quoting decreased anxiety and depression symptoms. They report the facilitation of showing their emotions via art (e.g. dance or filmmaking) and increased level of body awareness as well as self-other awareness. Overall, although the autism spectrum disorders remain untreatable (Ren et al., 2022), art therapy proves to be a useful tool in helping patients with their social functioning, daily living tasks, and well-being of children with ASD (Wypyszyńska et al., 2021). However, we think there is still plenty of room for research in this field.

Conflict of interest

The authors declare that they have no conflict of interest related to the publication of this article.

Author contributions

Original concept of study: KKL. Collection, recording and/or compilation of data: JL. Analysis and interpretation of data: KKL. Writing of manuscript: JL, KKL. Critical review of manuscript: JL. Final approval of manuscript: JL.

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