

The Effect of Play Therapy on Social Interaction of Learners with Autism Spectrum Disorder

Ghita Maulida Ulyanisa Adibah^{1*}, Febrianawati Yusup²

^{1, 2}Universitas Islam Negeri Antasari Banjarmasin

* e-mail: gmaulidasa@gmail.com

Abstract

Learners with Autism Spectrum Disorder (ASD) often experience barriers in establishing social interactions that have a direct impact on relational development at school. Play therapy is one intervention approach that is considered effective in stimulating social development through fun and structured activities. This study aims to examine the effect of play therapy on the social interaction of learners with ASD through a literature study. Twenty articles published in the last five years were analyzed, selected based on criteria of thematic relevance. The review categorized play therapy into five approaches, including direct social, music and movement, visual and manipulative, collaborative play, and physical intervention. The review found that all of these approaches can improve social dimensions such as eye contact, reciprocal communication, cooperation and emotional expression. The conclusion of this study suggests that play therapy should be integrated into inclusive education practices as part of social interventions for learners with ASD.

Keywords: *Autism Spectrum Disorder; Inclusive Education; Literature Review; Play Therapy; Social Interaction;*

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INTRODUCTION

Autism Spectrum Disorder (ASD) is a complex developmental disorder characterized by difficulties in social interaction, communication, and behavior (World Health Organization, 2023). Children with ASD experience different development than typical children. This is due to a gradual decline in cognitive abilities (Katilik & Djie, 2022). ASD can result from brain development abnormalities that affect the number and function of nerve cells, which can occur during pregnancy or after birth. This developmental disorder is generally caused by dysfunction in the central nervous system.

The causative factors of ASD can be genetic in origin, where genetic changes in the chromosomes trigger the condition. Even if a parent has no history of ASD, certain genetic mutations can still increase the risk. In addition, environmental factors such as exposure to harmful substances during pregnancy also contribute to the development of ASD. Therefore, a comprehensive understanding of the interaction between genetic and environmental factors is crucial for prevention and early diagnosis. The diagnosis of ASD is generally made at the age range of 18 to 30 months, when symptoms such as speech delay, behavioral disorders, and barriers to social interaction are identified (Iskandar et al., 2024). The earlier the diagnosis is made, the

greater the chance that children will receive appropriate interventions to support their optimal development.

Law of the Republic of Indonesia Number 20 Year 2003 Article 32 Paragraph 1 states that special education is education for students who have difficulties in following the learning process due to physical, mental, emotional disorders, or because they have special potential and talents. Children with ASD are entitled to education, even though they have developmental barriers from an early age, especially in communication and social interaction, which cause delays in language, play skills, cognitive function, and social adaptation compared to children their age (Suratmi, 2022). Their behavior tends to be monotonous, repetitive, and lacks interest in interacting with peers, thus requiring a directed educational approach and intervention. One therapeutic approach that can help learners with ASD is play therapy.

Play therapy is an intervention approach that uses play activities as a tool to improve learners' social interaction and communication. Through play activities, learners can express themselves, learn to establish interactions with others, and develop social skills in a safe and fun atmosphere. Play therapy can provide significant benefits for learners with ASD, including improved ability to share, take turns, and communicate effectively (Iskandar & Indaryani, 2020). During therapy sessions, learners can learn to recognize and express their emotions, as well as understand the emotions of others.

This study aims to analyze the effect of play therapy on improving the social interaction of learners with ASD. Various studies have shown that play therapy can improve learners' social skills. However, there are still gaps in the understanding of the mechanisms underlying the success of this therapy. By analyzing the various studies that have been conducted, it is expected to provide a clearer picture of the effectiveness of play therapy and how this approach can be optimized to support the social development of learners with ASD.

METHODS

This research uses a literature study approach to analyze the effect of play therapy on the social interaction of learners with ASD. Literature study is a research method that aims to collect, evaluate and synthesize relevant research results to gain a thorough understanding of a particular topic (Brignardello-Petersen et al., 2025). Literature was collected from various trusted scientific sources such as Google Scholar, Garuda, Semantic Scholar, and PubMed using the keywords autism spectrum disorder, play therapy, and social interaction. Article selection was conducted by reviewing the title and abstract to assess relevance, then reading the article content thoroughly to ensure conformity with the research focus. Inclusion criteria included publication within the last five years, in Indonesian or English, and relevant to the topic of play therapy in learners with ASD. The analysis was conducted descriptively by summarizing the main findings of each article that had been selected, so as to provide a clear picture of the effectiveness of play therapy in improving social interaction skills in learners with ASD.

FINDING AND DISCUSSIONS

Limited social interaction in children with Autism Spectrum Disorder (ASD) remains a major obstacle to their educational process and daily life. Overly instructional approaches often fail to build meaningful and sustained engagement (Rogers et al., 2021). Play therapy is considered a more functional alternative, as it provides space for learners to develop social skills through flexible and fun situations (Elbeltagi et al., 2023). However, its effectiveness is highly dependent on the type, strategy and implementation model, so it needs to be examined based on a more specific category of approaches.

1. Life Social Play Therapy

The direct social play therapy approach prioritizes strengthening basic communication skills through guided social activities. Habibi (2022) implemented a six-week intervention in a small group format with the guidance of teaching staff, through activities such as facial expression games, taking turns saying names, and simulating two-way conversations. The intervention was

shown to significantly increase learners' social activeness and responsiveness to social stimuli. The iterative nature of the activities provided space for learners to recognize interaction structures and build trust in communication. Success was also evident in the increased engagement without constant prompting, which represents the growth of spontaneity and initiative in interaction. Thus, habituation through directed social activities can open up previously limited communication channels for learners with ASD.

The social training program developed by Rogers et al. (2021) supports these findings, applying a cooperative play approach in scenarios designed to resemble everyday life. Activities such as social simulations with peers and two-way communication exercises yielded positive results on verbal initiative, attention to the other person, and decreased avoidance behavior. The effectiveness of this approach was not only demonstrated by the quality of interactions during the sessions, but also the sustainability of prosocial behavior after the intervention. The study by Chung & Ray (2025) through the Child-Centered Play Therapy model further confirms the positive impact of the direct social approach, where learners with ASD are given the freedom to choose games and facilitators respond empathically and reflectively. This strategy successfully facilitates the development of two-way communication, emotion recognition, and decreased aggressive responses. The success of this approach is evident in the fact that interactions are not forced, but develop gradually through guided play experiences.

Despite promising data on effectiveness, the implementation of this therapy depends on professional readiness and available program structures. Elbeltagi et al. (2023) assert that the absence of implementation standards and the lack of specialized training for facilitators may hinder the success of the therapy. The success of direct social therapy depends not only on the method, but also on the quality of implementation and continuity of the program. Therefore, the development of this intervention requires support from educational or rehabilitation institutions to ensure the involvement of competent professionals and standardized implementation guidelines. This therapy has the potential to be used in school settings if equipped with adequate and systematic support structures.

2. Music and Movement Based Play Therapy

The use of music and movement as a therapeutic medium has been shown to stimulate social dimensions that are difficult to reach through conventional verbal approaches. Pavlou & Garmpis (2025), in a systematic review of twelve studies, reported that learners with ASD gained improvements in attention, contact initiation, social expression, and interaction coordination when engaged in musical play using natural or digital tools. Research conducted by Kanzari et al. (2025) complemented these findings by proving that a 12-week combination of music and rhythmic movement can strengthen social engagement in groups while reducing repetitive behaviors that are a common feature of ASD. This therapy uses a playful approach, encourages exploration, and provides positive sensory stimulus, so that learners become more comfortable in dealing with group social situations.

The effectiveness of music and movement-based play therapy in improving the social interaction of learners with ASD is corroborated by the findings of Ke et al. (2022). In a systematic review and meta-analysis of a number of music interventions, musical activities encouraged active participation, strengthened emotional engagement, and improved the quality of social communication in various educational or therapeutic settings. Music serves as a non-verbal communication channel that utilizes rhythm, melody, and affective expression, so learners with limited language pragmatics are still able to have meaningful interactions. When music activities are done regularly, they show increased responsiveness to social initiation from others and decreased tendency to withdraw from their surroundings. These results suggest that repetitive and structured rhythmic patterns can strengthen emotion regulation and openness to interpersonal interactions.

Oktaviani et al. (2021) added supporting evidence through a review of improvisational music therapy practices in learners with ASD. Activities such as taking turns playing instruments, creating melodies together and adjusting tempo were shown to encourage joint attention, expand

communication intentions and shape more flexible social responses. The absence of verbal demands in these activities provided space for them to engage emotionally and interact in ways that suited their individual capacities. The integration of rhythmic patterns and explorative freedom allows learners to feel safe while interacting and develop social skills gradually. This kind of intervention is effective in forming a shared experience that is both fun and functional for the development of social communication in learners with ASD.

3. Visual and Manipulative Media-Based Play Therapy

Specially designed visual media of manipulative objects can be used effectively to support the development of social skills of learners with ASD. In a study by Oktaviani et al. (2023), the use of daily activity-themed flash cards was shown to significantly improve social communication after five days of intervention. The visual materials provided consistently helped learners recognize social meanings in situations they commonly encounter, such as asking for help, greeting or showing emotions. This approach not only strengthens visual recall of social situations, but also allows them to adapt responses more appropriately in social interactions. Repetitive visualization through this medium facilitates symbolic understanding of social interactions without the demands of complex verbal communication. The use of static visuals like this is also flexible to be applied in individual or small group sessions.

The effectiveness of visual media is reinforced through the research of Safitri et al. (2023), who developed an augmented reality (AR) based flashcard model for three children with ASD. Each flashcard not only featured illustrations, but was also enriched with 3D animations that could be accessed through digital devices to enhance visual appeal and concentration. In five consecutive sessions, learners showed progress in understanding and executing social instructions, such as responding to greetings or mimicking certain facial expressions. The intervention also resulted in increased verbal initiative, especially when learners commented on moving images or asked questions about the content of the visuals they saw. This technology-based approach offers a more dynamic and customizable visual form, expanding opportunities for learner engagement during sessions. Despite the limited duration of the intervention, the results suggest that the use of AR-based interactive media provides a significant additional stimulus for the social learning process of learners with ASD. This research also shows the potential of applying simple technology to support visual strategies in the context of inclusive education therapy.

In addition to visual media, the use of manipulative objects such as plasticine also provides an effective social learning space for learners with ASD. Paseno et al.'s study (2022) involved learners in a two-week play therapy session that focused on shaping plasticine following specific instructions. This activity not only practiced fine motor coordination, but also created a situation that encouraged learners to wait their turn, listen to directions, and express wishes verbally. In the process of shaping objects according to instructions, learners are trained to follow a systematic activity structure and interact in a two-way manner through guidance from the therapist. Evaluation results show that learners become more responsive to social instructions and are able to express their needs without showing avoidance behavior. Plasticine is effective because it is flexible, familiar and can be used in a variety of games involving roles and social rules. This approach provides an active learning experience through fun activities, but is still geared towards building communication and social engagement gradually.

Another manipulative medium that is increasingly used in play therapy is LEGO, especially in a collaborative format. Saribu et al. (2024) reported positive results from an intervention with five primary school learners who engaged in structure-building activities with LEGO in groups. Learners were assigned different roles and asked to work together to build a specific object, creating a natural need to talk, request and convey ideas. Over the course of the session, learners showed improvements in their ability to respond to social invitations, maintain short conversations, and better follow group rules. The interactions that emerged were spontaneous and not solely triggered by the therapist's instructions, but rather grew out of the dynamics of playing together. These therapy sessions became a safe space to practice communication skills such as giving advice, asking for help, or responding directly to instructions. The effectiveness of LEGO

as an intervention tool lies not only in its attractive physical form, but also in its capacity to create real and meaningful social contexts through collaboration between learners. This approach is considered highly relevant for reinforcing social learning in an environment that resembles everyday life.

Wright et al.'s (2023) research in the I-SOCIALISE program extended the validation of the effectiveness of LEGO-based play therapy on a wider scale. The study involved over 250 learners from various primary and secondary schools in the UK, who attended group therapy sessions for 12 weeks. Learners were assigned specific roles such as builder, provider or director in a shared object-building task, which naturally encouraged two-way communication and cooperation. Evaluations using the SSIS instrument and reports from teachers represented improvements in learners' social skills, including the ability to take turns, listen, and convey ideas within the group. In addition, the social behavior changes achieved were shown to persist up to several weeks after the program was completed, indicating that the intervention had a medium-term effect. LEGO therapy in this study was structured while remaining flexible, utilizing learners' interest in construction activities as an entry point to social learning. This study provides evidence that manipulative approaches in play therapy can be applied systemically in mainstream schools, thereby expanding access of learners with ASD to social intervention programs integrated with formal education activities.

4. Collaborative and Structural Play Therapy

Collaborative games that involve directed cooperation and consistent rules can be used to stimulate social skills, especially for learners with ASD who often need explicit boundaries in interaction. Fitria et al. (2024) applied the Montessori approach through nature table media to create natural interactions in small groups. The activities arranged allowed learners to engage directly in joint observations, discussions about natural objects, and composing simple narratives based on the objects observed. From observation, learners showed improvement in initiating conversations, maintaining eye contact, and showing social concern, such as giving turn or helping friends without being asked. The interactions took place without pressure, as they were facilitated by an open play environment. This approach accommodates the need for visual and sensory support, thus strengthening spontaneous social engagement.

Research by Iskandar (2023) offers a more structured approach through the utilization of snakes and ladders game as a medium to gradually train social understanding. The game not only stimulates cognitive abilities, but also presents direct social learning opportunities through turn-taking mechanisms, win-lose rules, and behavioral adjustments to consequences. During the play process, learners begin to demonstrate an understanding of turn-taking, the ability to wait, and adherence to game rules without excessive repetition of instructions. In addition, the dynamics that emerge during the game help form an awareness of social responsibility, such as encouraging friends when they fall behind or accepting the outcome of the game with a positive attitude. This process shows that structural play experiences can be utilized to reinforce basic social values that are the foundation of healthy interactions. By combining the fun of play and the application of clear rules, this intervention succeeded in creating a safe space for learners to learn without performative pressure.

De Carvalho et al.'s study (2024) reinforced the effectiveness of collaborative games by developing a digital board game model. The game contained structured instructions that required learners to work together, take turns, complete tasks together, and respond alternately to visual and verbal stimuli. During the intervention sessions, they showed improvements in social initiative, attention to playing partners, and interest in completing the game cooperatively. In addition to encouraging more balanced interactions, this approach also provided a safe enough space for learners to practice social skills without the pressure of explicit communication. Researchers noted that learners' engagement increased consistently with session repetition, demonstrating the importance of structure in building social comfort. Thus, a game design that incorporates cooperation, repetition and clear visual direction was found to support the development of social relations in a fun and purposeful setting. This additional evidence

reinforces that social structure-based play approaches can be used as an applicable intervention method in educational or therapeutic settings for learners with ASD.

5. Play Therapy Based Structured Physical Intervention

Systematically designed physical-based interventions provide an alternative approach in strengthening social skills, especially for learners with ASD. Qi et al. (2024) in their study compared two types of motor training, Modified Ball Training Program (MBTP) and Basic Coordination Training Program (BCTP), which proved that both were able to improve social interaction although in different ways. MBTP was more effective in encouraging social communication skills through collaborative and structured games. Meanwhile, BCTP stimulates more awareness of others and control of social behavior. Activities such as throwing and catching the ball are done in group play, so learners learn to respond, pay attention, and adjust their actions to their playmates.

The results of this intervention are shown through an increase in SRS-2 scores and a decrease in CARS scores in learners, which represents a decrease in autistic symptoms related to social interaction. The effectiveness of this motor intervention indicates that the social dimension does not always have to be developed through verbal or cognitive exercises, but can also be fostered through movement activities that demand social coordination. Such interventions can be integrated into physical education or group therapy sessions, as they are flexible and do not pose a heavy communication burden. Over the course of the program, learners showed steady improvement in the ability to follow social instructions, maintain visual contact during play, and respond alternately to play partners. These behavioral changes were noted to start significantly in the fourth week of intervention and continued to increase until the end of the session. In addition, learners experienced increased attention to group activities and began to show initiative to engage without having to be verbally directed.

A meta-analysis conducted by Chan et al. (2021) pooled data from twelve controlled studies with a total of 350 children and adolescents undergoing physical activity interventions. Results represented small to moderate improvements in communication skills (standardized mean score of 0.27) and social functioning (standardized mean score of 0.39) after the intervention. Effective physical activity programs generally last a minimum of eight weeks with regular exercise frequency. While some of the social functioning results were subject to publication bias, the overall findings support the integration of physical activity as part of social learning strategies for ASD learners. With the right approach and sustainability, structured movement activities can be an entry point for learners with ASD to build more stable and meaningful social relationships.

Improving the social skills of learners with ASD can be facilitated through physical activities that are developed in a structured and repetitive manner. Xing et al. (2025) developed a 12-week group exercise program involving 11 learners with ASD and compared it with an ASD control group and typical controls. The intervention consisted of four sessions per week, each 60 minutes long, focusing on physical games that encouraged cooperation and social contact. Evaluation results showed a significant decrease in solitary behavior and increased engagement in social games such as playing together and following rules. The results provided evidence that physical activity in the form of structured group games can effectively stimulate social responses, even in participants with limited comprehension of verbal instructions. This study indicates that physical activity designed in a group play format can facilitate social responding without reliance on complex verbal instructions.

These findings are in line with the results of a literature review conducted by Levante et al. (2023), which reviewed various exercise programs as interventions for learners with ASD. The review concluded that physical activities involving reciprocal interactions contribute to the development of social skills and emotion regulation, in addition to improvements in motor function. Physical games conducted in a group setting allow learners to practice turn-waiting skills, adjust to social rhythms and show initiative in interactions. The study also emphasized the importance of program structure and caregiver consistency in accompanying the social adaptation process during the intervention. Thus, structured exercise is not only a means of physical

strengthening, but also a safe space for learners to build repeated and meaningful social experiences. This approach reinforces the view that the social dimension can grow naturally through appropriately designed and supportive movement activities.

CONCLUSION

Learners with Autism Spectrum Disorder (ASD) often experience barriers in establishing social interactions that have a direct impact on the learning process and relational development at school. Play therapy is one intervention approach that is considered effective in stimulating social development through fun and structured activities. This study aims to examine the effect of play therapy on the social interaction of learners with ASD through a literature review. Ten articles published in the last five years were analyzed, selected based on criteria of thematic relevance and methodological feasibility. The review categorized play therapy into five approaches, including direct social, music and movement, manipulative media, collaborative play and physical intervention. The review found that all approaches can improve social dimensions such as eye contact, reciprocal communication, cooperation and emotional expression. The effectiveness of the therapy depends on the structure of the activity, the involvement of the facilitator, and environmental support. The conclusion of this study represents that play therapy is worth integrating into inclusive education practices as part of social interventions for learners with ASD.

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