

Systematic Review On Effectiveness Of Play-Based Group Interventions On Enhancing Social Interaction Skills In Children With Autism Spectrum Disorder

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Abstract

Background of the Study: Autism Spectrum Disorder (ASD) is characterized by challenges in social communication and interaction, which often impede children's ability to form peer relationships and engage in social contexts. Children with ASD frequently experience difficulties initiating and maintaining social interactions, which can affect their overall development and participation in educational and community settings. Structured play within group settings has emerged as a promising approach to address these social deficits by providing opportunities for naturalistic social learning and peer engagement.

Objectives: The primary objective of this review is to evaluate the effectiveness of play-based group interventions in enhancing social interaction skills among children with ASD. The review aims to determine whether such interventions can improve social engagement, communication abilities, and collaborative play behaviors in children, and to identify factors that may influence intervention outcomes.

Method: A systematic synthesis of existing literature was conducted, focusing on studies that implemented play-based group interventions for children with ASD. The review considered studies conducted in educational or clinical settings and analyzed the effects of these interventions on social interaction skills, including peer engagement, communication, and social responsiveness. RCT study designs, various intervention protocols, and outcome measures were reviewed to provide a comprehensive overview.

Result: The findings indicate that play-based group interventions can lead to notable improvements in social interaction skills among children with ASD. Participants in these programs demonstrated increased peer engagement, enhanced communication abilities, and improved collaborative behaviors during play. However, outcomes varied across studies due to differences in intervention duration, frequency, group composition, and methods of measurement, highlighting the need for consistency in future research.

Conclusion: Play-based group interventions show promise as an effective strategy to enhance social interaction skills in children with ASD. While these interventions can foster meaningful social engagement and communication development, further research is needed to standardize intervention protocols and outcome assessments, ensuring that these programs can be effectively implemented across diverse settings and populations.

Keywords: play-based interventions, group therapy, social interaction, Autism Spectrum Disorder, children

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Introduction

Autism Spectrum Disorder (ASD) encompasses a diverse range of neurodevelopmental conditions characterized by significant challenges in social communication, social interaction, and restricted or repetitive patterns of behavior.¹ Children with ASD frequently experience difficulties in initiating, maintaining, and responding appropriately in social interactions, which can negatively impact the development of peer relationships, social competence, and overall participation in educational and community environments.² These social deficits are often accompanied by challenges in adaptive functioning, making it difficult for children to engage meaningfully in group settings or collaborative activities. Traditional

therapeutic approaches have primarily focused on individualized interventions targeting specific skills, such as speech therapy, occupational therapy, or behavioral interventions. While these methods have shown benefits in addressing core deficits, they may not fully replicate the dynamic social contexts children encounter in natural environments. Consequently, there is a growing interest in group-based interventions that utilize play as a medium to enhance social learning and foster peer interaction.³

Play-based group interventions provide structured opportunities for children to engage in cooperative activities, turn-taking, sharing, and role-playing within a social context, thereby promoting the development of essential social skills.^{4,5} By situating interventions

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within the naturalistic framework of play, children are encouraged to practice social communication and interaction in meaningful and motivating contexts, which may enhance generalization of skills beyond therapy sessions. These interventions are typically implemented in educational or clinical settings and may include guided facilitation by trained professionals, peer modeling, and the use of structured play protocols to scaffold learning.^{6,7,8}

This systematic review aims to synthesize evidence from existing studies to evaluate the effectiveness of play-based group interventions in improving social interaction skills among children with ASD. The review examines various intervention designs, outcomes related to peer engagement and communication, and factors that may influence effectiveness. By collating current evidence, the review seeks to provide insights into best practices and inform future research and clinical applications for supporting social development in children with ASD.

Method

Search Strategy

A comprehensive literature search was conducted across multiple electronic databases, including PubMed, Scopus, and PsycINFO, to identify studies evaluating the effects of play-based group interventions on social interaction skills in children with ASD. The search terms included "play-based interventions," "group therapy," "social interaction," "Autism Spectrum Disorder," and "children." Studies published between 2016- 2025 were considered for inclusion.

Selection Criteria

For the purpose of this systematic review, studies were considered for inclusion if they met several predefined criteria. First, only studies involving children diagnosed with Autism Spectrum Disorder (ASD) and ADHD were included, ensuring that the population under investigation directly reflected the target group for social skills interventions. Second, the studies were required to implement a play-based group intervention as the primary mode of therapy, allowing for the examination of social interaction skills within a naturalistic, peer-engaged setting. Third, included studies needed to assess outcomes specifically related to social interaction skills, such as peer engagement, communication abilities, collaborative play, or social responsiveness, to ensure the relevance and comparability of reported findings. Finally, studies had to be published in peer-reviewed journals, which helped maintain a standard of quality and reliability in the evidence base.

Conversely, studies were excluded if they focused on populations other than children with ASD and ADHD, such as typically developing children or those with other developmental disorders, as these groups would not provide relevant insights into ADHD & ASD-specific social intervention outcomes. Additionally, studies that did not incorporate play-based group activities as part of the intervention were excluded, as the review specifically aimed to evaluate the effects of group play

on social interaction. Studies lacking relevant outcome measures or failing to report quantifiable results related to social skills were also omitted, since such data are essential for assessing intervention effectiveness. Lastly, non-peer-reviewed publications, including conference abstracts, dissertations, and unpublished reports, were excluded to ensure the rigor and credibility of the review findings. This systematic approach to inclusion and exclusion helped create a focused and high-quality evidence base for evaluating the effectiveness of play-based group interventions in children with ASD.

Data Extraction and Quality Assurance

Data were independently extracted by two reviewers using a standardized form. Extracted information included study design, sample size, participant characteristics, intervention details, outcome measures, and key findings. Discrepancies between reviewers were resolved through discussion or consultation with a third reviewer. The methodological quality of included studies was assessed using the Cochrane Risk of Bias Tool for randomized controlled trials.

Results

Study Characteristics

A total of 8 studies met the inclusion criteria. These studies varied in design, including randomized controlled trials, quasi-experimental studies, and observational studies. Sample sizes ranged from 9 to 71 participants, with ages spanning from 4 to 14 years. Interventions typically involved group sessions lasting between 30 to 60 minutes, conducted 2 to 3 times per week over periods ranging from 8 to 16 weeks.

Outcome Measures

Primary outcome measures assessed included the Social Skills Improvement System (SSIS), the Autism Social Skills Profile (ASSP), and the Social Responsiveness Scale (SRS). Secondary outcomes encompassed peer interaction frequencies, communication behaviors, and parent or teacher ratings of social competence.

Key Findings

The majority of studies reported significant improvements in social interaction skills following play-based group interventions. Notably, a study by Sarah Wilkes-Gillan et.al (2022) demonstrated that children with ASD who participated in a play-based group intervention exhibited increased social engagement and communication skills. Similarly, another study by Lauren Parsons et.al (2019) found that the combination of play, peer-mediation, video-feedback and parent training enhance pragmatic language in children with autism. However, some studies reported modest or no significant improvements, highlighting the variability in outcomes. Factors contributing to these discrepancies included differences in intervention protocols, participant characteristics, and outcome measures.

Discussion

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The findings of this systematic review suggest that play-based group interventions can be effective in enhancing social interaction skills in children with ASD. The naturalistic context of play provides a conducive environment for children to practice and develop social skills, such as turn-taking, sharing, and initiating interactions. Group settings further facilitate peer modeling and social learning, which are crucial for generalizing skills across different contexts. Several factors influence the efficacy of these interventions. The intensity, duration, and frequency of sessions play significant roles in determining outcomes. Studies with higher intervention intensities and longer durations tend to report more significant improvements. Moreover, incorporating typically developing peers into group sessions may enhance social learning opportunities for children with ASD. Additionally, the involvement of trained facilitators who can guide interactions and provide appropriate scaffolding is

essential for maximizing the benefits of play-based interventions.

Despite the promising results, the variability in study designs, outcome measures, and participant characteristics underscores the need for standardized protocols in future research. Establishing uniform intervention parameters and outcome measures will facilitate comparisons across studies and help determine the most effective play-based group interventions for children with ASD.

Conclusion

Play-based group interventions present a viable and beneficial approach for enhancing social interaction skills in children with Autism Spectrum Disorder. While the existing evidence supports their efficacy, further research with larger sample sizes, standardized protocols, and long-term follow-up is necessary to optimize treatment strategies and establish definitive guidelines for clinical practice.

List of literature that are reviewed

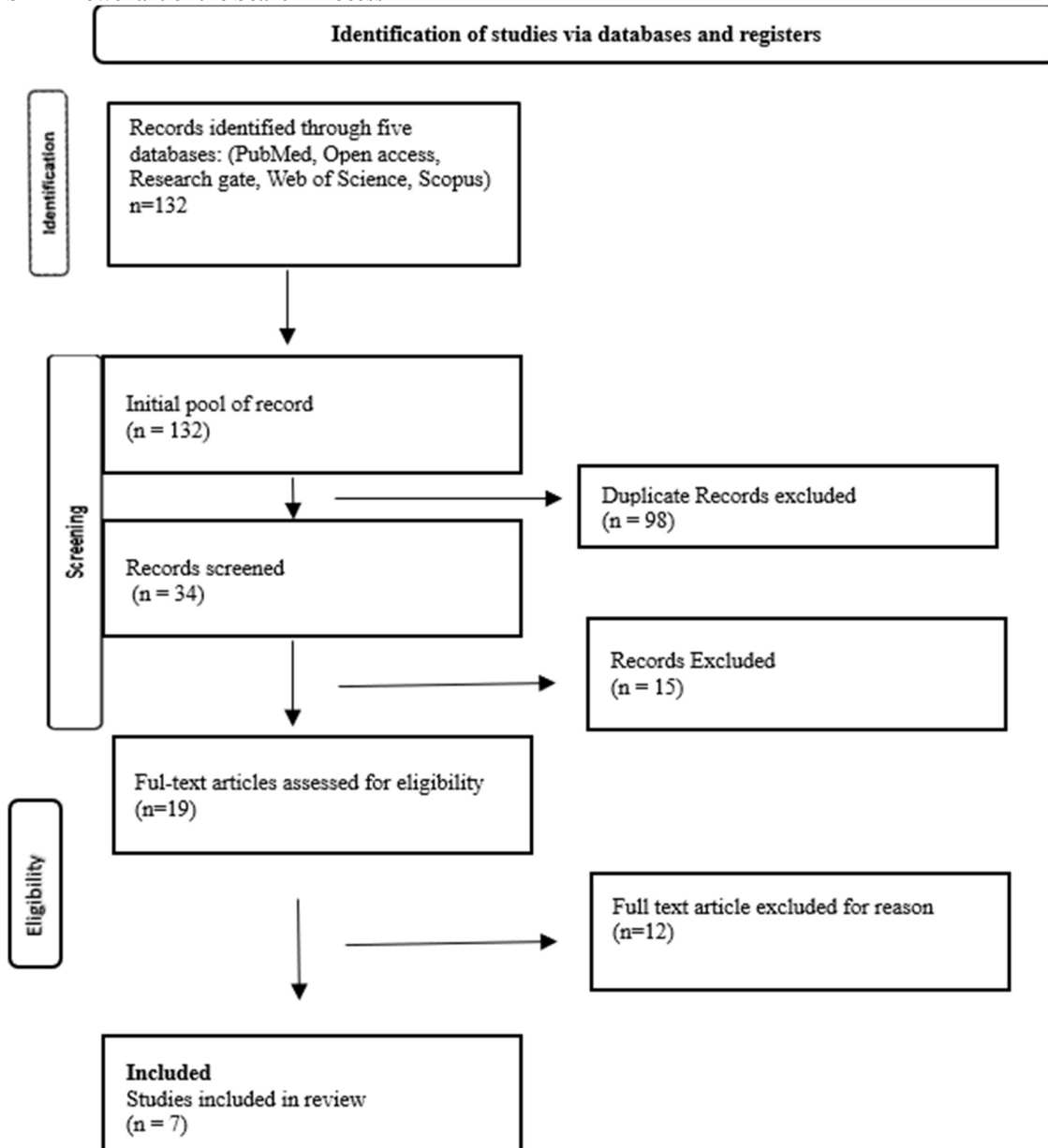
Table. 1

S. No.	Author (Year)	Study Design	Sample Size	Age group	Intervention Type	Key Findings
1	Beihua Zhang et.al 2022	RCT	55	4-12	PMI & EIBI	PMI therapy can increase social motivation in children with mild to moderate ASD, minimize undesirable behavior patterns, effectively improve overall social skills and enhance effective social communication with others.
2	Cally Kent et.al 2018	RCT	20+10	6-12	Video modelling, peer mediation and free play	There is improvement in social skills of asd children through play-based intervention.
3	Sarah Wilkes-Gillan et.al 2016	RCT	31	5-11	Play based intervention	The play-based intervention was effective for improving the social play skills of children with ADHD aged 5 to 11 years in peer-to-peer interactions in the clinic and home environments.
4	Lauren Parsons et.al 2019	RCT	71	6-11	Play-based peer-mediated pragmatic language intervention	It is found that the combination of play, peer-mediation, video-feedback and parent training enhance pragmatic language in children with autism
5	Sarah Wilkes-Gillan et.al 2022	RCT	29	5-11	Peer-mediated play-based intervention	Improvement in Social play skill by the peer mediated play-based intervention.
6	Catherine Myers 2021	RCT	9	6-14	Play based intervention (Face to face and telehealth)	The results show promise for the use of movement games and music programs for the improvement of motor deficiencies in children with ASD

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7	Jeevarathinam Thirumalai et.al 2025	RCT	46	8-12	Culturally adapted play-based intervention	Both PPBI and ABA improved behavior in children with ASD.
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PRISMA Flowchart of the Search Process



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