Review Article

Social Skills Training for Children with Attention-Deficit/Hyperactivity Disorder: Current Insights and Future Directions

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ABSTRACT

Objective: This review aims to evaluate the effectiveness of Social Skills Training (SST) for children with ADHD, assess its role within multimodal treatment frameworks, and highlight emerging trends in intervention strategies.
Study Design: Narrative review based on a comprehensive literature search.
Place and Duration of Study: This review was conducted at the Department of Child and Adolescent Psychiatry, Faculty of Medicine, Airlangga University, Dr. Soetomo General Academic Hospital, Indonesia from October 2024-Deecember 2024.
Methods: A narrative review of recent literature was conducted, examining SST outcomes in children with ADHD. Particular attention was given to integrated approaches and innovative SST delivery models.
Results: Evidence supports the efficacy of SST in improving social communication, emotional regulation, and peer relationships in children with ADHD. However, challenges persist in maintaining gains outside structured environments. Integrating SST with parent-mediated components and technological tools, such as virtual platforms or gamified training, has shown potential to enhance engagement and generalization of skills.
Conclusion: SST remains a valuable intervention for addressing social deficits in children with ADHD. Future research should prioritize optimizing delivery methods, tailoring programs to individual cognitive and behavioral profiles, and evaluating long-term outcomes to improve real-world applicability and treatment sustainability.

Key Words: ADHD, social skills training, peer interactions, emotion regulation, behavioral interventions

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INTRODUCTION

Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental condition characterized by persistent patterns of inattention and/or hyperactivity-impulsivity that interfere with daily functioning.[1] Per DSM-5, symptoms must appear before age 12 and be present in multiple settings. While academic difficulties are well recognized, social challenges are equally prominent and often enduring. Children with ADHD commonly experience peer rejection, conflict, and difficulty forming friendships due to impulsivity, emotional dysregulation, and poor social cue recognition.[2,3]

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These social impairments are not merely secondary to core symptoms; they are integral to the disorder and linked to long-term mental health risks and impaired functioning. Although pharmacological treatments help reduce core symptoms, they often fall short in addressing social deficits.[4,5]

However, to address the social deficits that medication alone may not resolve, Social Skills Training (SST) has become a widely adopted non-pharmacological strategy aimed at improving peer interactions, emotional regulation, and communication.[6,7] Yet, its long-term effectiveness and applicability in real-life settings remain uncertain. Evidence for sustained skill transfer beyond structured environments is mixed.[6,7]

This review examines the role of SST in ADHD, highlighting its effectiveness, limitations, and recent innovations. New approaches—such as technology-assisted tools, parent- and school-based strategies, and individualized training—show promise in enhancing social outcomes. Advancing SST delivery and ensuring real-world application are critical to improving the long-term social functioning of children with ADHD.

NON-PHARMACOLOGICAL INTERVENTIONS FOR ADHD

Non-pharmacological interventions play a crucial role in the multimodal management of ADHD, particularly in addressing the social, emotional, and behavioral

challenges that medications alone often fail to resolve.[6,7,8] While pharmacological treatments such as stimulants and non-stimulants can effectively reduce core symptoms, they do not directly target social impairments or executive dysfunction.[9,10] Psychosocial interventions are therefore essential to help children navigate daily life, build peer relationships, and develop long-term coping skills.[4,5] Several structured approaches have been developed to improve emotional regulation, peer interaction, and adaptive functioning.[11,12,13,14]

Psychoeducation forms the foundation of these interventions, educating children, parents, and teachers about ADHD and effective management strategies. Increasing parental understanding has been shown to enhance treatment adherence, improve parenting practices, and reduce stigma, creating a more supportive environment both at home and school.[15,16]

Behavioral therapy remains a widely used approach, with techniques aimed at reinforcing positive behaviors and improving self-regulation. Behavioral Parent Training (BPT), a core component, equips parents with strategies to manage impulsivity and foster prosocial behavior, leading to improvements in symptoms, social skills, and academic outcomes.[17] Similar principles are applied in Behavioral Classroom Management, where structured reinforcement tools like the Daily Report Card (DRC) help teachers encourage appropriate behavior and enhance classroom engagement and peer interaction.[13] Behavioral Peer Interventions, often implemented in group settings such as summer camps, offer guided opportunities for practicing social skills and reducing peer rejection.[14]

Cognitive Behavioral Therapy (CBT) adds another layer by targeting negative thought patterns that contribute to emotional dysregulation and impulsivity.[6,8,15] Through cognitive restructuring and problem-solving, CBT helps children develop self-control and conflict-resolution skills, particularly when paired with parent and school-based support.[6,8,18] Other interventions include cognitive training, specifically targeting working memory and executive functions, and neurofeedback, which teaches self-regulation of brain activity through real-time feedback. While these show promise, especially for attention and impulse control, evidence of their long-term impact on functional outcomes remains mixed.[15,18]

Among all approaches, Social Skills Training (SST) stands out for its direct focus on the peer relationship difficulties common in ADHD. Unlike broader behavioral programs, SST is designed to improve social communication, foster friendships, and enhance real-world interactions.[19,20,21] Given the lasting impact of social impairments on psychological and functional outcomes, SST has become a central component of comprehensive ADHD care.[22,23]

SOCIAL SKILLS AND THEIR ROLE IN ADHD

Social skills are critical for successful peer relationships and emotional development, yet children with ADHD often face persistent challenges in interpreting social cues, regulating emotions, and engaging in appropriate interactions. These difficulties are core features of the disorder and not merely side effects of inattention or impulsivity.[22,23,24] Two key models explain these impairments: the social skills deficit model, which suggests a lack of necessary skills, and the performance deficit model, which highlights difficulties in applying known skills due to impulsivity and emotional dysregulation.[25,26]

As a result, children with ADHD frequently experience peer rejection, conflict-prone friendships, and long-term risks such as anxiety, depression, and poor academic outcomes. Given these impacts, targeted interventions are essential. SST is a widely used approach that teaches problem-solving, emotional regulation, and communication through structured activities and guided practice, aiming to improve real-world social functioning.[24,26]

SOCIAL SKILLS TRAINING IN ADHD

SST is a structured intervention aimed at improving social competence in children with ADHD. It targets core difficulties such as interpreting social cues, regulating emotions, and engaging in positive peer interactions. By promoting appropriate social behavior, SST helps reduce maladaptive patterns that often lead to peer rejection and isolation.[21,27]

Core Components of Social Skills Training

SST programs vary in structure and delivery, but most include several core elements aimed at improving real-world social functioning in children with ADHD. A key focus is teaching children to recognize social cues, such as facial expressions, tone of voice, and body language, which they often misinterpret, leading to inappropriate responses.[19,21] Verbal and nonverbal communication skills are also emphasized, including how to take conversational turns, maintain appropriate eye contact, and adjust behavior based on social context. Emotion regulation is another critical component, helping children manage frustration, impulsivity, and aggression through techniques like self-monitoring, cognitive restructuring, and relaxation exercises.[23,26] Programs also address problem-solving and conflict resolution by guiding children through real-life scenarios and role-play exercises to help them respond constructively in peer interactions. Perspective-taking and empathy are encouraged to help children understand others' thoughts and emotions; skills essential for building and maintaining friendships. These abilities are reinforced through behavioral rehearsal and role-playing, providing structured practice with feedback in a supportive environment. Finally,

because transferring skills to everyday situations can be challenging, many SST programs actively involve parents, teachers, and caregivers to promote generalization beyond the therapy setting.[7,8,19]

Effectiveness and Delivery of Social Skills Training in ADHD

SST has demonstrated moderate effectiveness in improving social functioning in children with ADHD. Research indicates that SST can enhance social competence and peer acceptance, improve conversational abilities, cooperation, and emotional regulation, and reduce impulsive or inappropriate behaviors. It also strengthens children's ability to resolve conflicts and navigate peer interactions more successfully.[7]

SST can be delivered through various formats, depending on individual needs and the setting. Individual therapy offers tailored support focused on specific social deficits but may lack opportunities for real-time peer interaction.[7,21] Group-based training, by contrast, allows children to practice skills with peers in structured sessions, making it especially effective for addressing peer relationship challenges.[14,15,21] School-based interventions integrate SST into the classroom, often led by counselors or teachers, and help children apply skills in their everyday environment. In addition, programs that actively involve parents and teachers have been found to significantly enhance the generalization and maintenance of social skills.[21,23]

Parental involvement plays a critical role in SST. Parents who participate in training sessions can reinforce skills through consistent feedback, create opportunities for practice in daily life, and address specific social challenges at home or in the community. Teachers also contribute significantly by embedding social skills instruction into classroom routines, using structured reinforcement such as praise and reward systems, and offering real-time coaching during peer interactions. Together, these efforts create a cohesive support system that maximizes the effectiveness of SST across multiple environments.[13,17,19]

CHALLENGES AND LIMITATIONS OF SOCIAL SKILLS TRAINING IN ADHD

Despite its benefits, SST faces several limitations that affect its real-world impact, especially for children with ADHD.[7,28] A key challenge is the limited generalization of learned skills to everyday settings.[29] While children may perform well in structured sessions, they often struggle to apply these skills in dynamic, unstructured environments like classrooms or playgrounds. Involving parents, teachers, and providing real-life practice opportunities can help bridge this gap.[7,21,22]

Another limitation is the variability in treatment response. Factors such as comorbidities, symptom severity, and motivation influence how well a child benefits from SST.[7,21] Personalized approaches and the inclusion of emotion regulation training can enhance outcomes for those with greater difficulties. SST also tends to produce short-term gains, with many children regressing once formal sessions end. Without continued reinforcement, improvements may not last. Regular booster sessions, ongoing involvement from caregivers, and the use of digital tools for practice may help sustain progress.[7,19,21]

A further concern is the mismatch between knowledge and performance. Many children with ADHD understand appropriate social behaviors but fail to apply them consistently due to impulsivity and emotional dysregulation. Addressing this requires more dynamic, real-time feedback and peer-mediated support rather than scripted instruction alone.[7,21] Finally, access to SST remains uneven. Limited availability of trained professionals, logistical barriers, and cultural differences can restrict participation. Expanding school-based and telehealth programs and adapting SST content to be culturally responsive may improve reach and effectiveness.[7,19,21]

To enhance SST's impact for children with ADHD, future approaches should prioritize skill generalization, personalized treatment, and sustained reinforcement.[7,30] Combining SST with therapies like CBT, executive function training, and emotion regulation may boost effectiveness. Emerging digital tools, including AI-based and gamified platforms, also show promise in improving accessibility and real-world applicability.[7,19,21,26,27]

FUTURE DIRECTIONS FOR SOCIAL SKILLS TRAINING IN ADHD

As understanding of ADHD and social development evolves, refining SST to improve its effectiveness, accessibility, and long-term impact is increasingly important. To address current limitations, future interventions should emphasize personalization, technological integration, real-world application, sustained reinforcement, and broader access.[7,19,21]

- Personalized and Adaptive Approaches: Given the diversity in ADHD presentations, SST should move beyond one-size-fits-all models.[30] Individualized plans tailored to each child's social deficits, cognitive abilities, and emotional needs can improve outcomes. Flexible session structures and hybrid models, integrating SST with CBT, executive function training, and parent-led strategies, offer a more comprehensive approach.[7,21]
- Technology-Assisted Training: Digital tools can enhance SST delivery through immersive, engaging platforms. VR simulations allow safe practice of real-life social scenarios, while AI-driven chatbots offer adaptive role-play opportunities. Gamified SST apps can improve

motivation and retention through interactive learning.[23,27]

- Integration Into Daily Environments: To promote generalization, SST should be embedded in natural settings. School-based programs offer daily opportunities for practice with peer and teacher support. Parent-led interventions at home and community-based activities (e.g., sports, camps) provide additional reinforcement in real-world contexts.[7,28,30]
- Long-Term Maintenance: SST gains often fade without continued support. Structured booster sessions, digital progress tracking, and peer support systems can help sustain improvements and prevent regression over time.[7,21]
- Expanding Access: Barriers such as cost, location, and limited specialist availability hinder access to SST. Telehealth programs, culturally tailored content, and policy efforts to secure insurance coverage can help make SST more widely available, especially for underserved populations.[7,19]

CONCLUSION

Social Skills Training remains a valuable intervention for children with ADHD, helping to improve social interactions, emotional regulation, and peer relationships. However, current limitations in generalization, long-term effectiveness, and accessibility highlight the need for innovative and integrated approaches. Future SST interventions should focus on personalization, technology-assisted training, real-world reinforcement, and sustained follow-up support to maximize their impact. By combining these strategies, SST can become a more effective tool in helping children with ADHD navigate social challenges and build meaningful, lasting relationships.

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REFERENCES

1. Faraone SV, Bellgrove MA, Brikell I, Cortese S, Hartman CA, Hollis C, et al. Attention-deficit/hyperactivity disorder. Nature Reviews Disease Primers 2024;10(1).
2. Eom TH, Kim YH. Clinical practice guidelines for attention-deficit/hyperactivity disorder: recent updates. Clin Exp Pediatr 2024;67(1):26-34.
3. Setiawati Y, Hartopo D, Rabitho FD, Chuanardi W. Investigating Attention Deficit Hyperactivity Disorder Symptoms, Emotional Dysregulation and Family Functioning in Children: A Community-Based Study in Elementary Schools in Surabaya, Indonesia. Soa Chongsonyon Chongsin Uihak 2024;35(4):250-257.
4. Bullard CC, Alderson RM, Roberts DK, Tatsuki MO, Sullivan MA, Kofler MJ. Social functioning in children with ADHD: an examination of inhibition, self-control, and working memory as potential mediators. Child Neuropsychol 2024;30(7):987-1009.
5. Haza B, Gosling CJ, Ciminaghi F, Conty L, Pinabiaux C. Research Review: Social cognition and everyday social skills in children and adolescents with attention-deficit/hyperactivity disorder: a meta-analysis of case-control studies. J Child Psychol Psychiatr 2024;65(9):1245-1254.
6. Sibley MH, Bruton AM, Zhao X, Johnstone JM, Mitchell J, Hatsu I, et al. Non-pharmacological interventions for attention-deficit hyperactivity disorder in children and adolescents. The Lancet Child Adolescent Health 2023;7(6):415–28.
7. Mikami AY, Smit S, Khalis A. Social Skills Training and ADHD-What Works? Curr Psychiatr Rep 2017;19(12):93.
8. Shrestha M, Lautenschleger J, Soares N. Non-pharmacologic management of attention-deficit/hyperactivity disorder in children and adolescents: a review. Transl Pediatr 2020;9(Suppl 1):S114-S124.
9. Peterson BS, Trampush J, Maglione M, Bolshakova M, Brown M, Rozelle M, et al. ADHD Diagnosis and Treatment in Children and Adolescents [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2024 Mar. Report No.: AHRQ 24-EHC003Report No.: PCORI® 2023-SR-03.
10. O'Connor L, Carbone S, Gobbo A, Gamble H, Faraone SV. Pediatric attention deficit hyperactivity disorder (ADHD): 2022 updates on pharmacological management. Expert Rev Clin Pharmacol 2023;16(9):799-812.
11. Syed A, Morandini HAE, Barbaro P, Watson P, Rao P. A narrative review of the effects of psychoeducation on children and adolescents with attention deficit hyperactivity disorder. Psychol Schools 2024;61(9):3465–96.
12. Huang XX, Ou P, Qian QF, Huang Y. Long-term effectiveness of behavioural intervention in preschool children with attention deficit hyperactivity disorder in Southeast China - a randomized controlled trial. BMC Pediatr 2021;21(1):561.
13. Iznardo M, Rogers MA, Volpe RJ, Labelle PR, Robaey P. The Effectiveness of Daily Behavior Report Cards for Children With ADHD: A Meta-Analysis. J Atten Disord 2020;24(12):1623-1636.
14. Cordier R, Vilaysack B, Doma K, Wilkes-Gillan S, Speyer R. Peer Inclusion in Interventions for Children with ADHD: A Systematic Review and

Meta-Analysis. Biomed Res Int 2018;2018:7693479.
15. Coelho LF, Barbosa DLF, Rizzutti S, Bueno OFA, Miranda MC. Group cognitive behavioral therapy for children and adolescents with ADHD. Psicol Reflex Crit 2017;30(1):11.
16. Veloso A, Vicente SG, Filipe MG. Effectiveness of Cognitive Training for School-Aged Children and Adolescents with Attention Deficit/Hyperactivity Disorder: a Systematic review. Frontiers Psychol 2020;10.
17. Marquet-Doléac J, Biotteau M, Chaix Y. Behavioral Parent Training for School-Aged Children With ADHD: A Systematic Review of Randomized Control Trials. J Atten Disord 2024;28(3):377-393
18. Sciberras E, Efron D, Patel P, Mulraney M, Lee KJ, Mihalopoulos C, et al. Does the treatment of anxiety in children with Attention-Deficit/Hyperactivity Disorder (ADHD) using cognitive behavioral therapy improve child and family outcomes? Protocol for a randomized controlled trial. BMC Psychiatr 2019;19(1):359.
19. Storebø OJ, Elmose Andersen M, Skoog M, Joost Hansen S, Simonsen E, Pedersen N, et al. Social skills training for attention deficit hyperactivity disorder (ADHD) in children aged 5 to 18 years. Cochrane Database Syst Rev 2019;6(6):CD008223.
20. Bünger A, Urfer-Maurer N, Grob A. Multimethod Assessment of Attention, Executive Functions, and Motor Skills in Children with and without ADHD: Children's Performance and Parents' Perceptions. J Atten Disord 2021;25(4):596-606.
21. Spence SH. Social skills training for children and adolescents. In: Elsevier eBooks;2023.p.169–202.
22. Soares EE, Bausback K, Beard CL, Higinbotham M, Bunge EL, Gengoux GW. Social Skills Training for Autism Spectrum Disorder: a Meta-analysis of In-person and Technological Interventions. J Technol Behav Sci 2021;6(1):166-180.
23. Huang YH, Chung CY, Ou HY, Tzang RF, Huang KY, Liu HC, et al. Treatment effects of combining social skill training and parent training in Taiwanese children with attention deficit hyperactivity disorder. J Formos Med Assoc 2015;114(3):260-7.
24. Mikami AY. Attention-Deficit/Hyperactivity Disorder and the challenges of social exclusion. In: Oxford University Press eBooks;2013.p.228–37.
25. Ros R, Graziano PA. Social Functioning in Children with or without at risk for Attention Deficit/Hyperactivity Disorder: A Meta-Analytic Review. J Clin Child Adolesc Psychol 2018;47(2):213-235.
26. Haza B, Gosling CJ, Ciminaghi F, Conty L, Pinabiaux C. Research Review: Social cognition and everyday social skills in children and adolescents with attention-deficit/hyperactivity disorder: a meta-analysis of case-control studies. J Child Psychol Psychiatr 2024;65(9):1245-1254.
27. Goertz-Dorten A, Dose C, Hofmann L, Katzmann J, Groth M, Detering K, et al. Effects of Computer-Assisted Social Skills Training in children with Disruptive Behavior Disorders: a randomized controlled trial. J Am Acad Child Adolescent Psychiatr 2022;61(11):1329–40.
28. Chacko A, Merrill BM, Kofler MJ, Fabiano GA. Improving the efficacy and effectiveness of evidence-based psychosocial interventions for attention-deficit/hyperactivity disorder (ADHD) in children and adolescents. Translational Psychiatr 2024;14(1).
29. Wong KP, Qin J, Xie YJ, Zhang B. Effectiveness of Technology-Based Interventions for School-Age Children with Attention-Deficit/Hyperactivity Disorder: Systematic Review and Meta-Analysis of Randomized Controlled Trials. JMIR Mental Health 2023;10:e51459.
30. Caterfino A, Krishna S, Chen V. Novel and complementary treatment approaches in attention-deficit/hyperactivity disorder. Curr Opin Pediatr 2024;36(5):562-569.