

Social Skills Interventions for Children with High Functioning Autism: A Comparison of Treatment Philosophies and Their Outcomes

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Background

- Autism spectrum disorder (ASD) includes lifelong, complex neurodevelopmental disorders that range in severity.
- 1 out of 68 of children have ASD.¹
- Incidence and prevalence rates have been rising since the 1960s. Nearly half of children on the *spectrum*, have high functioning autism (HFA), meaning, they have preserved cognitive functioning and age appropriate language and intelligence.²
- However, common with other children on the autism spectrum, they have challenges in pragmatics or social language skills.³
- Effective interventions are needed because these skills are crucial in academic, emotional, and social development. Without intervention, children with HFA often face isolation leading to mood and anxiety problems or depression.⁴
- Social Skills Training (SST) and Cognitive-Behavioral Therapy (CBT) are two common approaches. See Figure 1 for details.

Objective

To examine and compare the evidence and provide a review for two social skills interventions for school-aged children with high functioning autism (HFA), Cognitive Behavioral Therapy and Social Skills Training.

Methods

Search Terms:

- A search of peer reviewed articles was conducted on PubMed and PsycINFO using a combination of different search terms such as "social skills", "high functioning autism," "cognitive based therapy," "social skills," "intervention," and "Asperger syndrome."

Inclusion Criteria:

- Children aged 6-18 with a diagnosis of autism according to ICD-10 criteria
- Intervention with a social skills training (SST) approach or a cognitive behavioral therapy (CBT) approach
- Use of an outcome measure that captures at least one of three components of social cognition: emotion recognition, theory of mind capabilities, and executive functioning/problem solving.
- IQ above 70 on Wechsler Intelligence Scale for Children
- Abstracts were screened for inclusion criteria.
- A hand search of references lists, applicable was completed as the final step.

Social Cognition

The search yielded a total of 9 studies that met criteria. Even within a theoretical approach (CBT, SST, hybrid), there was a lot of variability regarding specific intervention procedures (e.g., use of videos, role play, workbooks, etc.). These interventions targeted one or more of the 3 core components of social cognition: emotion recognition, theory of mind capabilities, and executive functioning / problem solving.

1. Emotion recognition: Ability to recognize emotions through non-verbal cues (facial expressions, eye contact, body language, and tone of voice).

2. Theory-of-mind capabilities: Being able to understand that others have beliefs, desires, intentions, and perspectives that are different from one's own.

3. Executive Functioning / Problem Solving: Being able to identify and regulate one's emotional state, and develop and implement strategies for building relationships.

* SST articles often focused on emotion recognition and/or theory of mind development. CBT articles often focused on executive functioning development or problem-solving skills. Hybrid treatments that implemented principles from both interventions often assessed at least two of the three aspects of social cognition and competence.

Social Skills Training

- Theory = Pragmatic deficits in ASD are related to the inability to perceive and interpret non-verbal social cues, and the expression of beliefs and complex feelings of others.⁵
- Therapeutic approach = Increase awareness of nonverbal communication⁶
 - Explicit teaching and repeated practice of new skills and behaviors.⁷
 - Visual aids, modelled behavior, explicit instruction of appropriate pragmatic skills.
- Goal = Develop skills in recognizing non-verbal body language and theory of mind skills. These skills are crucial in developing and maintaining social relationships.⁸

Cognitive Behavioral Therapy

- Theory = Pragmatic deficits in ASD are related to the inability to regulate emotions and develop impulse control.⁹
- Therapeutic approach = Target social-emotional state, social-interpersonal problem-solving skills, and social cognition
- Psychoeducation, establish rapport with child and family.
- Structured sessions focusing on problem solving / executive functioning.¹⁰
- Goal = development of efficient strategies to regulate emotions and control feelings. Create more positive experiences in developing social relationships and react to different social situations.³

Hybrid Approach

Figure 1

Conclusion / Summary of Findings

- Preliminary evidence suggests that CBT and SST can each be effective in improving social cognition for children with HFA. However, the ability to aggregate findings and draw strong conclusions is limited by inconsistent and flawed research methods.
- Interventions seem most effective with young children. However, children with HFA may not be identified until pre-school or later (when social-pragmatic deficits become apparent).¹¹
- SST interventions were associated with improvements in theory of mind and emotion recognition. This suggests children with HFA are able to improve their ability to analyze and adapt to social environments and understand other's perspectives.
- CBT interventions were associated with better emotional problem solving skills. These skills allow these children to manage negative psychological states, such as depression or anxiety.
- A hybrid approach may provide the most flexible and customizable approach that would accommodate the most individuals.

Limitations

- There is little consensus on the definition of social skills and why deficits persist in this population. This contributes to a wide variety of intervention methods and outcomes.
- Methodological flaws like lack of control group and lack of blinded raters of behavior.
- Disagreement on who should provide the intervention (e.g., psychologist, SLP, teacher, sibling).
- More agreement in treatments = generalization of skills

Future Directions

- Future studies should:
- Use more rigorous methodological design: use of control group, blinded raters, larger sample size, more naturalistic settings
- Standardize definitions and conceptualizations of social skills and why the deficit persists.
- More manualized interventions. This will also allow for more consistent outcome measures throughout studies.⁸
- More consistency regarding who delivers the intervention, and more communication/collaboration between overlapping professions (psychologist, SLP, or typical peer)

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