Effectiveness of an Occupational Therapy-Led Social Skills Group Using Parent Training: A Pilot Study

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Abstract

Background: Social skills support the development of a positive self-concept and engagement in a variety of life roles, habits, and routines. The Occupational Therapy Practice Framework clearly defines the occupational therapist's role in working with children with difficulties in social skills; however, little research exists examining the effectiveness of occupational therapy-led group interventions to support social skills development. Incorporating parent training into social skill development can improve overall outcomes and reinforce skill development across contexts.

Objective: The purpose of this pilot study was to determine whether an occupational therapy-led social skill group, combined with parent training, was effective in improving social skill outcomes in children with parent-reported social skill delays.

Method: Occupational therapists developed collaborative social goals and implemented a social skills group intervention with eight school-aged children presenting with parent-reported social skill delays. In addition, occupational therapists provided parent training to support onsite interventions. Pretest and posttest data was collected and analyzed.

Results: The results of this pilot study indicate that 8/8 children demonstrated progress in social skills on outcome measures including the Canadian Occupational Performance Measure and Goal Attainment Scaling.

Conclusion: This pilot study supports the premise that occupational therapy-led social skills intervention groups, combined with parent training, are effective in promoting social skills. Occupational therapists and occupational therapy assistants have a clear role in designing and implementing group interventions to support social skill development.

Comments

The authors declare that they have no competing financial, professional, or personal interest that might have influenced the performance or presentation of the work described in this manuscript.

Keywords

social skills, social participation, group intervention, parent training, children

Credentials Display

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Social skills support the development of a positive self-concept and engagement in a variety of life roles, habits, and routines. Early social skill development has been found to be an important factor in improving future performance, health, and wellness (Cahill et al., 2020; Cheung et al., 2022; Jones et al., 2015; Leigers et al., 2016). A longitudinal study found statistically significant associations between a child’s social-emotional skills in kindergarten and their social health and wellness as a young adult (Jones et al., 2015). Authors also noted that early social skill development was related to a variety of young adult outcomes, including those related to employment, mental health, criminal activity, and substance abuse (Jones et al., 2015). Research suggests that adolescents with autism spectrum disorders (ASD) are significantly less likely to see friends outside of school, be called by friends, or be invited to social activities and are, therefore, in need of social skill development (Shattuck et al., 2011).

Social skills are a construct developed by academics, and terminology and definitions often vary by author. Many authors use the term social skills to convey the underlying performance skills required to communicate and interact effectively with peers, including both verbal and nonverbal interactions. Some authors discuss the concept of social competence or social-emotional skills (Jones et al., 2015), while others discuss the concept of social cognition (Soto-Icaza et al., 2015). In occupational therapy, the terms social participation and social interaction skills are frequently used (American Occupational Therapy Association [AOTA], 2020; Cardoso da Silva & Oliver, 2021). Social participation is defined as a primary occupation in the Occupational Therapy Practice Framework (OTPF-4; AOTA, 2020), and social interaction skills are defined as the underlying performance skills necessary for optimal participation in this occupation. These underlying performance skills consist of 27 observable actions that support or hinder social interaction, including initiating and terminating social interaction, maintaining flow, expressing emotion, and taking turns in the social context (AOTA, 2020).

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM5-TR), many children with disabilities, including children with ASD, attention deficit hyperactivity disorder (ADD/ADHD), learning disabilities (LD), and behavioral disorders (BD) present with challenges in social participation (American Psychiatric Association, 2022). These difficulties include challenges with reciprocal communication, making friends, turn-taking, physicality-supporting communication, empathizing, and self-regulation. It is within the scope of occupational therapists and occupational therapy assistants to address these challenges. For the purposes of this paper, the term social skills will be inclusive of both the occupation of social participation and the underlying social interaction skills.

**Intervention: Child Focused**

Various interventions are used to develop social skills, with varying levels of evidence supporting their use (Fox et al., 2020; Gates et al., 2017). Gates et al. (2017) completed a meta-analysis examining various group social skills interventions for children with ASD and concluded that group interventions led to moderate overall improvements in the social competence of participants. In a systematic review examining the effectiveness of interventions designed to improve social skills for children with autism, researchers found strong evidence for group-based social skills training programs, moderate evidence for activity-based and computer-based interventions, and mixed evidence for both peer-mediated interventions and social stories (Tanner et al., 2015). Finally, Fox and colleagues (2020) found moderate evidence supporting social skills interventions incorporating peers in a group setting for children with ADHD.

There are a variety of social skill programs and resources available to occupational therapists and occupational therapy assistants. Many of these are commercially available and are not discipline-specific
while others have been developed by or in collaboration with an occupational therapist (e.g., Zones of Regulation® [Kuypers, 2011], Every Child Wants to Play [Mori & Piantanida, 2007]). Each resource is designed to teach social skills to children and adolescents with or without social skill deficits. While these programs provide a framework and consistent terminology for providing intervention across settings, many are limited by their general approach to social skills, which may not address the specific needs of each individual in a group. In addition, the programs that were not developed in collaboration with an occupational therapist have limited recognition of the impact of individual sensory processing differences and self-regulation on social skills and the holistic approach of understanding the child in relation to the contexts in which they are interacting.

**Intervention: Parent Focused**

Parent involvement and parent or caregiver training are increasingly used as part of occupational therapy interventions to increase skill generalization and allow for practice and reinforcement of skills outside of a traditional therapy visit (Graham et al., 2013). Numerous studies have demonstrated the positive outcomes of parent participation in social skills interventions across various disciplines (e.g., Dogan et al., 2017; McConkey et al., 2020; Radley et al., 2014; Wilkes-Gillan et al., 2016). In these studies, parent involvement ranged from partial involvement in the intervention to total involvement, with parents carrying out the intervention following a training period. Parent training programs have been found to produce rapid acquisition of target skills in children with ASD (Smith et al., 2000), increase the generalizability of skills (Radley et al., 2014), strengthen family relationships, and decrease social isolation (McConkey et al., 2020). Social skills training for children with ASD that incorporates parent training also has been found to produce improvements in greeting and social behaviors, as well as conversational skills (Barry et al., 2003). Beaumont and Sofronoff (2008) found that parent training programs targeting social problem-solving skills demonstrated maintained effects at a 5-month follow-up, with teachers reporting generalization of skills to the school setting. This suggests that incorporating parent training into social skill development can improve overall outcomes and reinforce skill development across settings and contexts.

**Practice-Based Research**

Maintaining strict intervention protocols is often difficult when evaluating social skill interventions. Crooke and Olswang (2015) promote practice-based research (PBR) in clinical settings, emphasizing that highly controlled experimental conditions are inconsistent with clinical practice, especially when conducting interventions involving children. In fact, several authors have argued for using more clinically relevant designs that can examine the questions that arise in daily practice and take place in real-world settings (Crooke & Olswang, 2015; Westfall et al., 2007).

Practice-based research, as described by Epstein (2011), is “the use of research-inspired principles, designs, and information gathering techniques within existing forms of practice to answer questions that emerge from practice in ways that inform practice” (p. 17). In this vein, the social skills intervention program used in this pilot study gathered information from participants and their families to inform the program’s design. Interventions were then designed to fit the needs of the individual children, their parents and caregivers, and the overall group dynamic, which changed from session to session.
Purpose

This pilot study aimed to determine whether an occupational therapy-led social skills group, combined with parent training, was effective in improving social skill outcomes in children with parent-reported social skill delays.

Method

This pilot study used a pretest-posttest design with parent-reported measures to assess social skills. Evaluative data described below were collected before and following group intervention. Parent training was included during the intervention phase. The study received approval from the university Institutional Review Board, and all of the participants signed informed consent.

Participants

The participants included eight children with parent-reported deficits in social skills. Inclusion criteria included children 6 to 10 years of age, with no known receptive language deficits, who had basic verbal skills, and who were able to participate in outdoor activities without physical support. Children were evaluated by the primary investigator following an initial phone screen with a parent or caregiver. The children ranged in age from 7 years, 4 months to 10 years, 0 months at the time of pretesting. The most frequent diagnoses included ASD and ADHD. See Table 1 for participant baseline data.

Baseline Assessments Used

Two tools, the Social Skills Improvement System (SSiS) and the Sensory Profile 2 Caregiver Questionnaire (SP2), were used for baseline assessment and intervention planning and are presented in Table 1.

SSiS. The SSiS Rating Scales are a component of the SSiS system (Gresham & Elliott, 2008). The SSiS Rating Scales were designed to assess the social behaviors of students that can impact teacher-student and parent-child relations, peer acceptance, and academic performance (Gresham & Elliot, 2008). The rating scale is a standardized, norm-referenced tool for students 3 to 18 years of age and documents the perceived frequency of behaviors that may impact student social development and adaptive functioning. The tool includes parent rating forms, student rating forms, and teacher rating forms. The social skills scale includes seven subscales, including communication, assertion, engagement, cooperation, responsibility, empathy, and self-control. The problem behavior scale includes four subscales, including externalizing, internalizing, bullying, and hyperactivity/inattention. The internal consistency reliability reported for this tool is .95 for the combined male/female Parent Form for 5 to 12 years of age (Gresham & Elliott, 2008). For this pilot study, the parent rating forms were used during the pretesting phase to determine areas of parent-perceived deficit in social skills. Scores reported in Table 1 represent normative data in the form of percentile ranks, specifically for social skills and problem behaviors.

SP2. The SP2 is a standardized pediatric assessment that documents children’s sensory processing patterns and allows clinicians to identify the effect of sensory processing on functional participation (Dunn, 2014). The assessment is used with children 3 to 14 years of age, and for the purposes of this pilot study, the Caregiver Questionnaire was used to determine to what extent children in this cohort demonstrated sensory differences that may impact their social skills. The tool uses a 5-point rating scale where 1 = almost never, and 5 = almost always. Scores are categorized into four quadrants according to the test protocol, as well as in Sensory and Behavioral subscales (see Table 1). The reliability of this tool, as measured through internal consistency, suggests adequate consistency in the section/quadrant groupings, with values between .60 and .90.
Table 1
Demographic and Baseline Pre-test Data for Participants

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age*</th>
<th>Diagnosis</th>
<th>Social Skillsb</th>
<th>Problem Behaviorsb</th>
<th>Sensory Quadrantsc</th>
<th>Sensory &amp; Behavioral Subscalesc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>7-2 Autism</td>
<td>11</td>
<td>27</td>
<td>WNL</td>
<td>Auditory1, Visual1, Oral1, Social-emotional2</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>10-0 Autism, drug exposure</td>
<td>1</td>
<td>98</td>
<td>Seeking1, Avoiding3, Sensitivity2, Registration1</td>
<td>Touch2, Movement2, Body position2, Conduct1, Social-emotional2, Attentional3</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>8-7 ADHD</td>
<td>&lt;1</td>
<td>98</td>
<td>Avoiding2</td>
<td>Visual2, Conduct2, Social-emotional2</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>8-3 Probable ADHD</td>
<td>2</td>
<td>91</td>
<td>Seeking1, Avoiding3, Sensitivity2, Registration1</td>
<td>Touch2, Body position2, Oral2, Conduct2, Social-emotional3, Attentional3</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>9-2 Autism</td>
<td>--</td>
<td>--</td>
<td>Seeking1, Avoiding3, Sensitivity3, Registration1</td>
<td>Auditory2, Touch3, Movement3, Body position1, Oral2, Conduct3, Social-emotional3, Attentional3</td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>9-4 Autism</td>
<td>76</td>
<td>69</td>
<td>WNL</td>
<td>Oral3</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>9-1 Autism, speech delay</td>
<td>17</td>
<td>92</td>
<td>Avoiding2</td>
<td>Movement1, Social-emotional2, Attentional2</td>
</tr>
<tr>
<td>8</td>
<td>F</td>
<td>7-4 Autism</td>
<td>4</td>
<td>94</td>
<td>Seeking1, Avoiding2, Registration1</td>
<td>Touch2, Movement2, Body position1, Conduct1, Social-emotional2, Attentional2</td>
</tr>
</tbody>
</table>

* Age reported in years-months format.

b Percentile ranks.

c Sensory Quadrants and Subscales descriptors are indicated using superscripts: 1 Less than others; 2 More than others; 3 Much more than others.

Outcome Measures

The Canadian Occupational Performance Measure (COPM) and Goal Attainment Scaling (GAS) were used at both pretest and posttest to plan intervention and measure outcomes.

The COPM

The COPM is a client-centered, individualized outcome measure designed to detect changes in a client’s perception of their occupational performance over time (Law et al., 2005). Test-retest reliability of the COPM has been found to be .84 and above, and concurrent and content validity of the COPM is supported (Carswell et al., 2004; Law et al., 2005). In addition, research indicates the tool is sensitive to clinical change (Eyssen et al., 2011). Carswell et al. (2004) reported that a change of two or more points on the COPM is considered clinically important; therefore, a change of two points on the COPM was considered clinically significant in this pilot study. The COPM was administered to parents as a proxy, thus measuring parent perception of each child’s current ability to perform social skills. This tool was used to assist in collaborative goal-setting and to determine program outcomes. During the interview process, anecdotal comments were noted as part of the outcome measures.

GAS

GAS has been used to measure therapeutic outcomes in the social sciences and has become increasingly popular for evaluating functional client goals (May-Benson, 2014; King et al., 1999). GAS is useful as a functional outcome measure because it provides an individualized, criterion-referenced...
measure of change, “making it potentially responsive to small changes that are perceived by children, families and teachers as important for daily function” (King et al., 1999, p. 37).

Clients are assigned a baseline score at the start of the intervention, typically a -2 when a decrease in performance over time is unlikely or -1 when a decrease in baseline performance is possible (King et al., 1999). The following scoring guidelines were used at posttesting: -2 indicating a decrease in function, -1 indicating no change in performance, 0 indicating the expected outcome was achieved, +1 indicating a greater than expected outcome, and +2 indicating a much greater than expected outcome. This tool was used to assist in collaborative goal-setting and to determine program outcomes.

**Program Design and Intervention**

The social skills group, designed by the lead authors and based on current evidence-informed practice, occurred over 2 weeks. The 2-week intervention simulated a summer day camp, with each session occurring daily and lasting 3 hr. The first week occurred in late June, while the second week occurred in early August, for 30 hr of occupational therapy-led intervention. The program was predesigned with collaboration and fidelity for internal consistency between the three lead occupational therapists and modified for individual needs as they arose in session. See Appendix A for a sample daily intervention plan.

During the daily 3-hour camp sessions, occupational therapy-led interventions included self-regulation activities using Zones of Regulation® (Kuypers, 2011), Whole Body Listening concepts (Sautter et al., 2020), and strategies from the Social Thinking curriculum (Garcia Winner & Crooke, 2010; Madrigal & Garcia Winner, 2008). Additional interventions included activities based on the OTPF social skills: initiating and terminating social interactions, maintaining a flow of social interactions, shaping the content of social interactions, and physically supporting social interactions (AOTA, 2020). During the second week of intervention, evidence-based concepts were expanded and built on, with an emphasis on maintaining and adapting social skills. Lead occupational therapists met daily, after each camp session, for 60 min to reflect, collaborate, develop, and modify intervention plans. These collaborations created high fidelity in sessions to ensure consistency in the types of interventions applied.

During camp time, the parents were given the opportunity to share and support each other in an occupational therapy-moderated training setting. The parents were coached by an occupational therapist in activities to apply between camp sessions to support established goals. See Appendix A for a sample intervention plan with parent activities. Between the first (late June) and second (early August) camp sessions, the parents were instructed to apply and implement intervention strategies, as well as keep data on individualized, targeted outcomes.

**Data Analysis**

Demographic and pretest data were analyzed and characterized by ranges and frequencies. Outcome measures were administered at pre and posttest using descriptive statistics to analyze for differences over time.

**Results**

Eight children attended the social skills group. Demographic information, including pre-test data representing SSiS and SP-2, can be found in Table 1. Three children were parent-identified as female (37.5%), and 5 of the children were parent-identified as male (62.5%). The average age of the campers was 8 yrs, 7 months (age range: 7 yrs, 2 mo to 10 yrs 0 mo). Six children had parent-reported diagnoses of ASD, and two had a diagnosis of ADHD/Probable ADHD.
**SSiS**

All of the children with completed assessments scored with differences on the SSiS. One child (#5) had missing data and, therefore, was excluded from the analysis of this assessment. Six of the seven remaining children scored above average on the ASD score, indicating a higher-than-average level of autism traits.

Six of seven children scored below the 20th percentile on the social skills scale, with four out of seven children scoring below the 5th percentile, indicating social skills scores were consistently well below average in this group of children.

The most common areas of skill deficit were in the subscales of communication engagement and empathy. On the problem behaviors scale, five out of seven children scored with above-average behaviors (considered a concern). The most common areas of concern were in subscales of Externalizing and Hyperactivity/Inattention.

**SP2**

The SP2 measures sensory differences in four quadrants (Seeking/Seeker, Avoiding/Avoider, Sensitivity/Sensor, Registration/Bystander), six sensory sections (Auditory, Visual, Touch, Movement, Body Position, Oral) and three behavioral sections (Conduct, Social Emotional, Attentional). All eight children presented with parent-reported sensory differences in at least one area. The largest areas of difference were in the categories of seeking, registration, touch, and conduct. The greatest single area of difference was in the behavioral category of social-emotional, where the most differences were in the areas (a) is sensitive to criticisms, (b) has strong emotional outbursts when unable to complete tasks, (c) gets frustrated easily, (d) needs more protections from life than same-aged children, and (e) has difficulty with friendships. Refer to Table 1 for additional details.

**COPM**

Before participation, all of the parents collaborated with the occupational therapists to set individualized goals that would support their child’s social interaction skills using the COPM. Each parent and OT collaborator set 3-5 individualized goals per child. At discharge, change scores were calculated for each of the goals and then were then averaged, to arrive at each child’s overall performance and satisfaction change scores. See Table 2 for additional COPM data, including goals set.

All of the parents reported positive changes in both the performance and satisfaction scores of the goals. Eight of eight parents (100%) reported overall improvements in their child’s performance scores. Five of eight parents (62.5%) reported performance change scores of 2.0 or greater, indicating clinically significant changes in occupational performance.

In addition, eight of eight parents (100%) reported improvement in their level of satisfaction with their child’s performance on social skill goals, while seven of the eight parents (87.5%) reported change scores that rose to, or above, the level of clinical significance (2.0).

**GAS**

Individual, collaborative goals established using the COPM were then quantified for GAS. Specific percentage improvement was attributed to each goal and scaled on the posttest. All children (8/8) demonstrated the expected level of change or greater than the expected level of change on goals set using GAS. After the intervention, GAS t-scores ranged from 50–64, demonstrating an effective level of change (King, 1999). T-scores between 50 and 60 fall within 1 SD of the mean, while scores over 60 represent greater than 1 SD, suggesting greater than expected functional progress as a result of therapeutic interventions (May-Benson, 2014).
### Table 2

*Canadian Occupational Performance Measure Participant Data*

<table>
<thead>
<tr>
<th>Client</th>
<th>Individualized Goals</th>
<th>Performance^a</th>
<th>Satisfaction^a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>1</td>
<td>-Maintain conversations</td>
<td>1.0</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>-Engage in play outside of preferred interests</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Demonstrate self-advocacy: preventing inappropriate interaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-Talk to peers appropriately</td>
<td>2.3</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>-Follow through with tasks independently</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Engage in non-favored activities with peers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-Respond to directions</td>
<td>3.3</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>-Acknowledge conversation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Maintain conversations when frustrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Maintain socially appropriate emotions when frustrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Respond to frustration in appropriate ways</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-Learn personal boundaries</td>
<td>3.2</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>-Take responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Respond to others appropriately</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Tolerate changes to routine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Improve back and forth communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-Demonstrate improved impulse control</td>
<td>2.4</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>-Maintain conversation with peers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Regulate body</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Participate in peer play</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Demonstrate sharing of toys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>-Take turns, go second</td>
<td>2.8</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>-Play with peers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Demonstrate increased flexibility in routines</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Tolerate criticism/feedback from peers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>-Maintain reciprocal conversations</td>
<td>2.7</td>
<td>4.3</td>
</tr>
<tr>
<td></td>
<td>-Read social cues</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Maintains personal space</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Attend to conversations without interrupting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>-Initiate interaction with peers</td>
<td>1.0</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>-Maintain reciprocal conversations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Voice opinion to advocate for self</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^a Scores presented are averages based on the total number of goals.

### Discussion

The results of this pilot study indicate that children attending an occupational therapy-led social skills group with parent collaboration and training demonstrate progress on outcome measures. These results support previous studies conducted by Henning et al. (2016) and Wilkes-Gillan et al. (2016), building the body of literature that suggests there is a need for occupational therapists and occupational therapy assistants to have a clear role in designing and implementing group interventions to support social skill development. This research adds to the evidence demonstrating that occupational therapy-led social skill interventions are effective for children with deficits in social skills (Fox et al., 2020). While the OTPF-4 specifically outlines social skills as an occupation occupational therapists can and should address, in practice, we often instead see teachers, speech therapists, psychologists, and social workers leading social skill groups. The distinct value of occupational therapy in supporting social skills is the emphasis on client-centered and functional outcomes (AOTA, 2020). As suggested in the results of this pilot study, through improved outcomes noted in the COPM and the GAS, establishing effective collaborative outcomes encourages occupational therapists and occupational therapy assistants to take lead roles in designing and implementing effective social skill group interventions.
Occupational therapists often use their professional reasoning to pull from a variety of current evidence-based interventions and devise an individualized program for maximum effectiveness. For example, it would not be uncommon for an occupational therapy-led social skills intervention to include a combination of various program components and/or tools, such as incorporating components of Zones of Regulation to support one child’s emotional regulation with social communication games to support turn-taking strategies for another child in the group. This differs from a selection of a specific social skills program with rigid adherence to the protocols provided therein and makes occupational therapists and occupational therapy assistants distinct in their delivery of client-centered interventions. This pilot study provides preliminary support for the practice of using a variety of tools to design a program that caters to the specific, individualized needs of children in a group setting.

In addition, this pilot study adds to the body of work that supports the use of collaborative goal setting using the COPM and/or GAS as outcome measures in occupational therapy practice. All children demonstrated progress on collaboratively written social skill goals. The COPM and GAS are rigor-based assessment tools that occupational therapists can use to design interventions, collaborate with families, and document changes, highlighting their importance and relevance. Both the COPM and GAS can be used effectively for measuring changes in social skills development.

The parents were involved in collaborative goal writing on the initial assessment, thus increasing their investment in their child’s social skill growth and development. The parents then received training as part of the combined intervention approach to support social skills for their child. The use of this combined approach makes it difficult to determine how much of which approach was more or less effective. As suggested previously, practice-based research often examines current practice, which includes the complex dynamics associated with parent-child interactions and parent collaborations (Crooke & Olswang, 2015). It is important to acknowledge that this combined approach with an emphasis on parent carryover was important in achieving successful outcomes.

Parent collaboration appeared to be a key aspect of successful outcome data. Although parent feedback was not formally analyzed as part of this pilot study, several comments supported the value and relevance of the parent training component. The comments included: “Parent training was awesome,” “wish we had more parent instruction time,” “I love hearing from other parents, getting feedback and resources.” Further research is recommended to support the parent training aspect more explicitly and establish measures for parent confidence and competence in social skill development.

One finding of interest is that all children in the current pilot study presented with sensory differences. It is important to determine whether sensory differences impede social skill development or if those constructs are independent. Current research suggests that children participating in social skill interventions should be screened for sensory differences, as there is a relationship between social skills and sensory processing (Hilton et al., 2006; Tomcheck et al., 2015). Sensory differences often need to be addressed during group intervention for effective group treatment approaches. Further research is suggested to determine the potential correlations between sensory differences and social skill development.

**Occupational Therapy and Social Skills**

The OTPF-4 suggests that social skill interventions can and should be developed and carried out by occupational therapists and occupational therapy assistants to support effective social participation. Although many occupational therapists and occupational therapy assistants anecdotally include interventions to address social skills, few articles are specific to the outcomes of occupational therapy.
group interventions addressing social skills (Henning et al., 2016; Wilkes-Gillan et al., 2016). According to Leigers et al. (2016), occupational therapists report receiving little training and education in addressing social participation in their coursework and/or fieldwork. They are, therefore, hesitant to provide interventions targeting social skills in pediatric settings or to leave these interventions to social workers, psychologists, or speech and language pathologists. Only 14.3% of OT students reported receiving training or education in addressing social skills in their college coursework or their Fieldwork II experiences, and fewer than half of respondents (46.5%) indicated they understood their role in addressing social skills in the school setting (Leigers et al., 2016).

So, while occupational therapists and occupational therapy assistants may express a lack of understanding regarding their role in addressing social skills (Leigers et al., 2016), the OTPF-4 clearly delineates our role in this area. The emphasis on social participation and social interaction skills in the OTPF-4 not only supports occupational therapy’s role in the evaluation and intervention of social skills but also provides a framework for understanding the domain of occupational therapy specific to this area of occupation. Occupational therapists and occupational therapy assistants should be providing interventions to support the development of social skills.

Limitations

Limitations to this pilot study include the small convenience sample, the lack of a control group, and a lack of blinding of researchers scoring assessments. In addition, individualizing interventions in a group can make an intervention challenging to replicate.

Additional research considerations would include replication for children of different diagnoses and age ranges. Ideally, a control group would be included to ensure that change is related to the occupational therapy intervention. Additional research should focus on which social skill deficits are most impacted by sensory differences and whether social interventions, sensory interventions, or a combination of both, are most effective in treating these needs. Another consideration would be the inclusion of typically developing peers to support social skills rather than adult models. Finally, it would be interesting to conduct research based solely on parent training to determine if an occupational therapist as collaborator model is effective in promoting social skills.

Conclusion and Clinical Implications

Occupational therapy-led social skill group intervention combined with parent training is effective in improving social skill development. Occupational therapists and occupational therapy assistants should be comfortable and confident in designing and implementing social skill group interventions. This preliminary research suggests that parent collaboration is an important component of social skill development and should be considered as part of the intervention process.

If you enjoyed this article and are able to give, please consider a contribution to support OJOT’s mission of providing open-access to high quality articles that focus on applied research, practice, education, and advocacy in the occupational therapy profession. https://secure.wmualumni.org/s/give?funds=POJO
References


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https://scholarworks.wmich.edu/ojot/vol12/iss3/3

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### Sample Daily Intervention Plan

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date:</strong></td>
<td>Wednesday</td>
</tr>
<tr>
<td><strong>Daily Theme:</strong></td>
<td>Flexible Thinking</td>
</tr>
<tr>
<td><strong>8:30 – 9:00</strong></td>
<td>Set Up</td>
</tr>
</tbody>
</table>
| **9:00 – 9:20** | Welcomes and Peer Hellos  
Story Time (using Whole Body Listening Concepts)  
- Book: A Superflex book  
- Guided discussion |
| **9:20 – 9:45** | Conversation Hearts (Conversation Starters)  
- Card game to promote social interaction  
- Guided discussion |
| **9:45 – 10:15** | Free Social Play (Encouraging organic play with peers)  
- Lego and other tabletop games  
- “Flexible brain” toss |
| **10:15 – 10:40** | Directed Game Time  
- Obstacle course (team work, direction following, turn taking, sensory regulation, peer engagement)  
- “Friend May I” - encouraging verbal initiation and requesting |
| **10:40 – 11:10** | Social Craft (promotes social interaction and sensory play)  
- Make playdough (make a "brain" shape and leave it out to dry)  
- Use brain shaped cookie cutters in play dough to promote discussion of flexible brains/flexible thinking  
- Children encouraged to ask for/share supplies, discuss purpose and product, etc. |
| **11:10 – 11:30** | Social Snack Time and Concept Review  
- Family style snack set-up to promote social interaction and problem solving  
- Discussion: table etiquette, flexible brain vs. rock brain; requesting needs, etc.  
- Jello (Brain shaped Jello mold), fish crackers, water/juice |
| **11:30 – 11:50** | Closing Social Story  
- Book reprise  
- Guided discussion  
- Video feedback (children watch video of day and observe social interactions) |
| **11:50 – 12:00** | Clean up, review day with parents, goodbye |
| **11:30 – 12:00** | **PARENT TRAINING**  
- Teach parents Social Thinking! curriculum concepts  
  - Flexible thinking concepts  
- Handouts provided for home use  
- Provide parents with ideas for role play at home.  
- Group discussion of home/school supports and barriers |