# AOTA Evidence Briefs

## Attention Deficit/Hyperactivity Disorder

**A product of the American Occupational Therapy Association's Evidence-Based Literature Review Project*

**A#6**

# Social skills training with parent involvement may benefit children with ADHD, especially those on stimulant medication

Frankel, F., Myatt, R., Cantwell, D. P., & Feinberg, D. T. (1997). Parent-assisted transfer of children's social skills training: Effects on children with and without attention-deficit hyperactivity disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 36,* 1056–1064.

**Level: IIA1a**

Non-randomized control trial, 2 groups, 20 or more participants per condition, high internal validity, high external validity

### Why research this topic?

Many children with attention-deficit/hyperactivity disorder (ADHD) experience rejection by their peers. The goal of social skills training programs is to improve the social skills of children who experience rejection. However, there is no strong evidence that children generalize the skills learned in treatment to the home, the classroom, or the playground. A notable flaw in social skills training programs is lack of parent involvement. In research by Frankel, Cantwell, and Myatt (1996) on a program involving parents, the parents reported **significant** (see *Glossary*) gains and generalization to the school setting. Only the children with ADHD alone showed generalization; the children who also had oppositional defiant disorder (ODD) did not show generalization.

### What did the researchers do?

Frankel and his colleagues (1997), of the University of California, Los Angeles, designed a study to test the effectiveness of a revised version of the treatment program that three of them had used in their 1996 research. The participants in the study were selected from a pool of children between the ages of 6 years 11 months and 12 years 11 months whose parents had requested their participation in the social skills training program at the University of California, Los Angeles. All children who had a diagnosis of ADHD (according to the criteria of the *Diagnostic and Statistical Manual of Mental Disorders*, 3rd ed. rev.). Children not having been prescribed stimulant medication were excluded. Eighty-five children qualified, but 11 dropped out. Of the remaining 74 children, 49 accepted into the program (37 boys and 12 girls) constituted the treatment group, and 24 put on the waiting list (19 boys and 5 girls) made up the control group. Within the treatment group, 35 children had ADHD and 14 did not. Within the control group, the corresponding numbers were 12 and 12.

The treatment program took place for 1 hour a week on 12 consecutive Thursdays. Two psychologists, or a psychologist and a licensed clinical social worker, conducted concurrent sessions for children and parents. The sessions for children each consisted of four segments: reports on homework assignments (10 minutes); a didactic presentation (including reinforcement for appropriate behavior), behavioral rehearsal between children, and coaching (15 minutes); coached play (25 minutes); and reunion of children with parents and finalization of contracts for homework (10 minutes). Topics included conversational techniques, techniques of group entry, techniques of persuasion and negotiation, rules for a good host, and more.

The sessions for parents each consisted of four segments too: review of parents' and children's performance on homework assignments (15 minutes); reading of a handout and answering of questions (30 minutes); presentation of the next homework assignment and anticipation of problems (5 minutes); and reunion of parents with children and finalization of contracts for homework (10 minutes). Topics of the handouts included encouragement and discouragement of children's social behavior; parental support of social skills; group entry and rejection; elements of effective praise; elements of a successful play date; and more.

The researchers were interested in *social skills* (as measured by parents using the Assertion and Self-Control subscales of the Social Skills Rating System); and *social behavior* (as measured by teachers using the Withdrawal, Likability, Aggression, and Hyperactivity subscales of the Pupil Evaluation Inventory). Assessments were made before the program began and shortly after it ended.

## What did the researchers find?

On the social skills measures, the treatment group showed significantly greater improvement than the control group.

On the social behavior measures, the treatment group showed significantly greater improvement on the Aggression subscale of the Pupil Evaluation Inventory than the control group. Further, the children without ADHD in the treatment group showed significantly greater improvement on the Withdrawal subscale than the children without ADHD in the control group. There was no difference between treatment and control groups for children with ADHD.

**Effect sizes** (see *Glossary*) on five of the subscales (two on the Social Skills Rating System and three on the Pupil Evaluation Inventory) indicated that at least 82.4% of treatment group children were "better off" (greater positive change) than average waitlisted children after treatment. The largest effect sizes were obtained on the two parent-reported subscales: self-control and assertion.

## What do the findings mean?

For therapists and other providers, the findings "suggest that children with ADHD are best helped by a combination of social skills training for themselves and training for their parents" (p. 1063).

## What are the study's limitations?

In this study, children with and without ADHD and children with and without ODD benefitted socially from a parental social skills training program. The assessment of social benefits was based on parent and teacher perception only, and no measures were based on the child's perception, nor on direct observation of the child in a social setting.

## Reference

Frankel, F., Cantwell, D. P., & Myatt, R. (1996). Helping ostracized children: Social skills training and parent support for socially rejected children. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders: Empirically based approaches* (pp. 591–617). Washington, DC: American Psychological Association.

## Glossary

**effect sizes** (Cohen's *r*)—An effect size is a measure of clinical significance. It provides information about the magnitude of effect of the treatment. Although related to significance, it is not as influenced by the size of the sample. Therefore, it is possible to have an outcome on which the treatment had a large effect (e.g., the treatment group improved a lot more than the control group) and still have a nonsignificant result. If the results have a large effect but no significance, this means that this effect may be sample specific and not generalizable outside the study. There are many different types of effect sizes. What is reported here is Cohen's *r*. Cohen's *r* can be interpreted in a manner similar to a Pearson's correlation coefficient:

| Effect size *r* | Size of the effect |
|---|---|
| <0.99 | Negligible |
| 0.10 – 0.29 | Small |
| 0.30 – 0.49 | Medium |
| >0.50 | Large |

Cohen, J. (1977). *Statistical power analysis for behavioral sciences.* New York: Academic Press.

**significance (or significant)**—A statistical term, this refers to the probability that the results obtained in the study are not due to chance, but to some other factor (such as the treatment of interest). A significant result is likely to be generalizable to populations outside the study.

Significance should not be confused with clinical effect. A study can be statistically significant without having a very large clinical effect on the sample. For example, a study that examines the effect of a treatment on a client's ability to walk may report that the participants in the treatment group were able to walk significantly longer distances than the control group. However, if you read the study you may find that the treatment group was able to walk, on average, 6 feet, whereas the control group was able to walk, on average, 5 feet. Although the outcome may be statistically significant, a clinician may not believe that a 1-foot increase will improve his or her client's function.

■ Terminology used in this document is based on two systems of classification current at the time the evidence-based literature reviews were completed: *Uniform Terminology for Occupational Therapy Practice—Third Edition* (AOTA, 1994) and *International Classification of Functioning, Disability and Health (ICIDH-2)* (World Health Organization [WHO], 1999). More recently, the *Uniform Terminology* document was replaced by *Occupational Therapy Practice Framework: Domain and Process* (AOTA, 2002), and modifications to *ICIDH-2* were finalized in the *International Classification of Functioning, Disability and Health* (WHO, 2001).

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