AOTA Evidence Briefs

Children With Behavioral and Psychosocial Needs

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

PSYCH #4

Social-skill training using instructions, prohibitions, or both can improve the social behavior of boys rejected by their peers

Bierman, K. L., Miller, C. L., & Stabb, S. D. (1987). Improving the social behavior and peer acceptance of rejected boys: Effects of social skill training with instructions and prohibitions. *Journal of Consulting and Clinical Psychology, 55,* 194–200.

Level: IB1a

Randomized controlled trial, 2 groups, fewer than 20 participants per condition, high internal validity, high external validity.

Why research this topic?

Often, children who are rejected by their peers are disruptive and socially aggressive. Compared with classmates who are accepted or neglected, they "are more likely to experience continued social problems, poor school adjustment, loneliness, and poor adult mental health" (p. 194). Social-skill training typically focuses on reinforcing positive behaviors. Its effectiveness with rejected children has not yet been established. Such training might prove more successful with rejected children if it also targeted the children's negative behaviors.

What did the researchers do?

Bierman, Miller, and Stabb (1987), of Pennsylvania State University (University Park), undertook a study to compare the effects of social-skill training using only positive instructions, only negative prohibitions, or both. The participants were first-, second-, and third-grade boys who had been rejected by their peers. Their average age was 7.6 years.

The boys were selected from a sample of 198 boys in four schools serving a rural population. First, using interviews, the researchers identified the two or three boys in each of 21 classrooms whom their peers thought to be the most negative. They then observed the 50 boys so identified in a play-group setting twice for 16 minutes each time. The 32 who received the highest negative scores were selected as targeted participants. An additional 72 boys were selected to serve as "treatment partners" (that is, nontargeted participants). They were randomly chosen from a group of boys who scored below the median of their class in negative nominations.

Within each school the researchers assigned the participants to one of four conditions: instructions, prohibitions, instructions and prohibitions, and no treatment. The three treatments consisted of 10 half-hour sessions, during which a targeted participant engaged in a series of cooperative tasks with three treatment partners. In the first five sessions, the participant interacted with one treatment partner only. For the next four sessions, he interacted with two, and for the last session, with three. The treatment partners rotated.

In the instruction condition, a coach described a target skill at the beginning of each session and asked the group to give some examples. The target skills were "(a) questioning others (for information, clarification, and invitation), (b) helping (by giving support and suggestions) and cooperating in play, and (c) sharing (by sharing materials and taking turns)" (p. 196). The coach then conducted two activities designed to promote practice of the target skill—for example, a cooperative art project and a guessing game. The coach praised the children's skill performance as they played, and rewarded each skillful behavior by placing a token in a cup marked with the child's name.

"In the prohibition condition, the coach presented a set of rules to control the children's negative behavior during the sessions: no fighting or arguing, no yelling, no being mean, no whining or bad temper. Each session included the same cooperative activities used in the instruction condition" (p. 196). However, the coach gave no instructions in specific skills and rewarded no specific skills. "Instead, the coach provided nonspecific praise and delivered tokens on a random schedule as long as the children engaged in cooperative activities without violating any of the rules.…Whenever a child violated one of the rules, the coach removed [his] cup for one min[ute], temporarily removing the ability to earn tokens" (p. 196).

In the instruction-and-prohibition condition, the coach reviewed the target skills before and after the activity and "delivered praise and tokens whenever children demonstrated target skills….The coach also stressed the rules and removed a child's cup and ability to earn tokens for one min[ute] contingent on negative behavior" (p. 196).

The outcome areas of interest were *positive initiated behavior*, *positive received behavior*, *negative initiated behavior*, and *negative received behavior* (all as measured by behavioral observations); *aggression* (as measured by peers using the Pupil Evaluation Inventory and by teachers using the Pupil Evaluation Inventory and the Abbreviated Teacher Rating Scale); and *sociometric status* (as measured by peers' ratings of how much they liked to play with the participant, peers' nominations of classmates they especially liked, and peers' nominations of classmates they did not like). Measures were taken before treatment, immediately after treatment, and 6 weeks after treatment. Peer and teacher ratings were collected again at 1 year after treatment.

What did the researchers find?

On the behavioral observations, immediately following treatment, "boys in the prohibition condition received **significantly** (see *Glossary*) more positive responses from peers than did boys in the instruction only or the no treatment condition" (p. 196). Also, boys in the prohibition condition "intiated significantly fewer negative behaviors…than boys who did not receive prohibitions" (p. 196).

At the 6-week follow-up, boys in the instruction condition "received more positive peer responses" than boys who did not receive instructions and "tended to initiate more positive behaviors" (p. 197). Further, "boys who received instructions, prohibitions, or the combination of instructions and prohibitions initiated fewer negative behaviors than boys who received no treatment.…Additionally, instructed boys received fewer negative behaviors than noninstructed boys" (p. 197).

From before treatment to the 6-week follow-up, "boys in the three treatment conditions maintained the same level of positive interactions….In contrast, boys in the no treatment condition experienced significant declines in positive interactions" (pp. 197–198). An opposite pattern was evident for negative interactions. That is, "boys in the three treatment conditions showed significant decreases in negative interactions.…Boys who received no treatment, however, experienced no improvements in their negative interactions" (p. 198).

On ratings for aggression, **no significant** (see *Glossary*) effects were evident.

On sociometric ratings, immediately after treatment, "boys who received a combination of instructions and prohibitions received significantly fewer negative nominations [from their treatment partners]…than did boys who received prohibitions alone.…By follow-up, boys who received the combined treatment received significantly fewer negative nominations from their treatment partners than boys who received instructions or prohibitions alone" (p. 198).

From before treatment to the 6-week follow-up, "boys in the combined condition received significantly fewer negative nominations from their treatment partners.…In contrast, boys who received instructions or prohibitions alone showed no change in the number of negative nominations received from their treatment partners" (p. 198).

At the 1-year follow-up, no significant effects were evident on either the aggression or the sociometric ratings.

What do the findings mean?

For therapists and other providers, the findings suggest that social-skill training using instructions, prohibitions, or a combination of the two can improve the social behavior of boys who are rejected by their peers. Only the combination, however, may improve the boy's acceptance by peers.

What are the study's limitations?

The study has one limitation: the small size of the sample in each treatment condition.

GLOSSARY

nonsignificant (or no significance)—A statistical term that refers to study findings that are likely to be due to chance differences between the groups rather than to other factors (e.g., the treatment of interest). A nonsignificant result is not generalizable outside the study. Like significance, a nonsignificant result does not indicate the clinical effect. Often studies will show nonsignificant results, yet the treatment group's mean will be better than the control group's. This is usually referred to as a trend in the right direction. Because significance is closely determined by sample size, nonsignificant results would often become significant if the sample size were increased.

significance (or significant)—A statistical term that refers to the probability that the results obtained in the study are not due to chance, but to some other factor (e.g., 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 those in the control group. However, after reading the study one 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 feel that a 1-foot increase will make his or her client functional.

This work is based on the evidence-based literature review completed by Ming-Hui Kuo, MS, OTR.

For more information about the Evidence-Based Literature Review Project, contact the Practice Department at the American Occupational Therapy Association, 301-652-6611, ext. 2040.