An experiment was performed to determine whether the mothers of 20 inner-city black preschoolers could successfully train their children in interpersonal problem-solving skills. The skills acquired by the mother-trained children were compared with those of 113 teacher-trained and 106 non-trained 4-year-olds, equated on initial IQ scores and school behavior. Mothers met in small groups weekly for 10 weeks, to learn games and dialogues which focused on language and interpersonal thinking skills (e.g., "How is this girl feeling?"). For 15 minutes daily during this period each mother used the games and dialogues with her child. The teacher-trained group of children was given similar instructions. The goal was to help the children cope with typical interpersonal problems, generate alternative solutions to a problem, and conceptualize potential consequences of an action. Results showed that 19 of the 20 children trained by their mothers improved in interpersonal skills, as measured by pre- and posttests. There was no difference in skill improvement between mother-trained and teacher-trained groups, but children trained by either their teacher or mother improved significantly more than those never trained. Children trained by their mothers or teachers also improved in school behavior. (BRT)
Training Mothers to Help Their Children Solve Real-Life Problems*


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Two years ago at SRCD, I presented our program for use by teachers to train four-year old "inner city" youngsters interpersonal cognitive problem-solving (ICPS) skills, a skills such as George Spivack just described. We showed that within a wide IQ range (70 - 120+) it was possible to improve behavior of impulsive and inhibited children, not by direct modification of the behavior itself, but by altering a child's interpersonal problem-solving thinking style. Youngsters who most improved in trained ICPS skills also improved most in behaviors describing impulsivity and inhibition. This direct link further supported Dr. Spivack's initial position that ICPS skills serve as a mediator to adaptive behavioral adjustment.

Today I'm going to tell you how we adapted the specifically designed program script used by teachers and trained mothers (20 of them) to use it with their child at home. We asked: Can mothers of black "inner city" four-year-olds learn

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See References.
to successfully transmit ICPS skills to their child and what would its effect be on the child's behavior as observed in school? Second, given the correlational data presented by Dr. Spivack, we also asked: Would the impact of a highly specialized program be different for boys trained by their own mother (N=13) than for girls trained by their own mother (N=7)? Finally, we were interested in how the impact of training by mothers, in a unique position to affect such skills, would compare to that of training by teachers (child N=113) or no training at all (child N=106).

All children attended Philadelphia Get Set day-care, with children trained by mothers from different centers than those trained by teachers.

The goal was to help the mother transmit a problem-solving thinking style to her child that would guide him in coping with typical problems (e.g., one child is in another's way), by teaching him to generate alternative solutions to problems, and to consider the potential consequences of an interpersonal act (e.g., pushing him out of the way). Because these ICPS skills were intimately related to defined levels of impulsivity and inhibition prior to training, the child was taught how, but not what to think, so he could choose and evaluate for himself what and what not to do.

First, I will describe highlights of the program, then the research results and implications:

aSee Reference
The Training Program

In a manner similar to that used by teachers, the early games consisted of basic word concepts needed to establish an association for their later use in problem-solving.

Thinking about the negation (through use of the word not) becomes important so a child can later decide what and what not to do, and whether something is or is not a good idea. With the games centered on people and interpersonal relations, one game the mother played was to say, "I am your mother. I am not a tree. Let's think of lots of things I'm not." Then the mother asked her child to tell what he is and lots of things he is not.

Association with words as same and different were important so the child could later think of different ideas and different things that "might happen if..." The child could also learn to recognize that for example, "hitting and kicking" were the same idea because they are both "hurting." The words same and different were first taught by encouraging the child to do the same thing the mother was doing (rolling his hands), then something different (e.g., pat his head).

Once words that designate people's feelings were identified, happy, sad, angry, it was possible to teach that people have feelings, that feelings change, and games were devised to find out how people feel -- by listening, by watching, by asking. That everybody does not choose the same thing is important in that many young children frequently assume others would choose what they would like. Using pictures of foods, forms of trans-
portation, animals, or places to be, the child was first asked what he would choose if given the choice of say, playing inside with a friend or playing outside by himself. Then he was asked what he thought another child (in the family) would choose. In problem-solving it is important to find things out about another person and the child was always asked, "How can you find out?"

If no other child was present, the mother picked up a family face puppet and in the voice of the puppet "character" said, "Which one do you think I would choose?" "How can you find out?" To emphasize the necessity of finding out, the puppet character always chose the opposite if the child made an assumption about his choice.

These games were followed by emphasis on why, because, and might, maybe through use of pictures, puppets and simple, role-playing techniques. A picture is shown of a girl crying and the mother says, "How is this girl feeling?" After the child says, "sad," the mother follows with, "She might be sad because..." Pointing to another child in the picture, the mother asks, "What can this boy do to make her feel happy again?" When the child answers, the mother says, "That might make her happy. Can you think of something different he can do?"

After having mastered the word concepts and pre-problem-solving thinking skills, the children were now ready for the games and dialogues that teach interpersonal problem-solving thinking.

Pictures were shown, like this:
Picture #1 [Girl feeding animals, boy looking on]

Though no problem is inherent in the picture, we just made one up. Here the child was told that this boy wants this girl to let him feed the animals, but she will not let him. The mother then asked, "What can this boy do so this girl will let him feed the animals?" After the child offered an idea, e.g., "ask her," the mother would follow with, "That's one way. Can you think of something different he could say or do?" Responses, "push her out of the way," "hit her," or "snatch the food from her," were treated in the same manner as, "ask." "Yes, that's one way, now let's think of different ways." If other children were not present, the mother would pick up a puppet and say, in the voice of the puppet character, "I wish I could think of an idea. Can you help me?" Neither the puppet character nor the mother ever told any solutions to the child.

In other games, the child was encouraged to think about "what might happen next?" if an act suggested by the child were carried out.

Picture #6 [Boy in wagon in way of girl on bike]

In this picture, for example, the child was told the problem: This girl (on bike) wants this boy (in wagon) to get out of her way so she can go by. After a solution was offered, e.g., "bang into him," the mother said, "That's one thing she could do. Now, let's think of what might happen next if the girl banged into him." (If needed, the child was guided with a more specific questions, "What might the boy do or say if this girl bangs
into him?" After one response, e.g., "he might hit her," the mother would say, "Yes, that's one thing that might happen. Can you think of something different that might happen?" Again, if needed, the mother held up a puppet and said, "I wish I could think of something different. Can you help me?" As in the case for solutions, the child was never told potential consequences to an act. Nonforceful solutions as "ask him" or "offer him a ride on her bike" were evaluated by the child in the same way as were forceful ones. With the tools the child now has, he can decide whether an act is or is not a good idea because of what might happen next.

The total length of training was 10 weeks, with the mothers meeting with us weekly (in small groups) to learn the games.

In addition to formal training, mothers were taught guided dialogues (in a manner similar to that of teachers) using the "style" of the program at other times during the day. In helping the child solve his own problems and evaluate his own solutions, the mother also learns to extract from the child his thinking.

Before training, a typical dialogue from our mother interviews:

Child: Mommy, Tommy hit me.
Mother: Hit him back.
Child: But I'm afraid.
Mother: You have to learn to defend yourself.
Child: O.K. Mommy.
After training, both mother and child having received training:

Child: Mommy, Tommy hit me.
Mother: Why did he hit you?
Child: I don't know.
Mother: He might have hit you because...
Child: He was mad.
Mother: Why was he mad?
Child: 'Cause I took his truck.
Mother: Is that why he hit you?
Child: Yep.

Mother: Grabbing is one way to get that truck. Can you think of something different to do so he won't hit you?

Child: I could tell him I'd just play a little while.
Mother: That's a different idea.

With this kind of dialoguing, the mother gained information that the first dialogue would not have allowed. With the child gaining the habit of thinking of alternatives, the mother can elicit more ideas from the child, in case Tommy should say, "no."

The goal is not to teach a child to simply get what he wants. The games and dialogues also help him cope with frustration when he cannot have what he wants.

Before training:

Child: (Starts to fingerpaint)

Mother: I don't want a mess now, your grandmother is coming for dinner.
Child: (Whining) But I want to! I won't make a mess.
Mother: Why don't you color in your coloring book?
Child: I don't want to! I want to fingerpaint.

Instead of constant nagging and what now becomes a power play between mother and child, here is a dialogue after training:

Child: Mommy, I'm going out to ride my bike.
Mother: Not now, we're having dinner soon.
Child: I'll come right back.

Mother: (Knowing differently) Can you think of something different to do inside for a little while. Remember, we're having dinner soon.

Child: I'll go get my firetruck.
Mother: You thought of a good idea.

Before training, when the mother did the thinking for the child e.g., Why don't you color in your coloring book?" the child's frustration and nagging was only increased. In the second dialogue, the child felt good about his own idea and didn't need to nag. The mother-child power play became unnecessary.

Results

Nineteen of the twenty youngsters trained by their mothers improved in both ICPS skills: ability to conceptualize alternative solutions to interpersonal problems and potential consequences to an act. Boys and girls improved at the same rate, important in light of the correlational data presented by Dr. Spivack. With systematically developed techniques, mothers can

\[ \text{See Reference} \]
transmit ICPS skills as successfully to boys as to girls. There was no difference in gain between mother-trained and teacher-trained groups. However, youngsters trained by either their teacher or mother gained significantly more than those never trained.

Most importantly, youngsters trained by their mother at home significantly improved in behavior as observed by their teachers in school. Six of eight (75%) who began as behaviorally aberrant were rated (on a validated rating scale) as behaviorally adjusted following training. This finding indicates an important generalizability of training, as ratings were made by teachers unaware of the training procedures and goals. Such improvement was true of 43 of 72 initially aberrant teacher-trained Ss (60%). Percentages in both trained groups were significantly greater than that of 25%, with 14 Ss showing improvement among 56 initially non-trained youngsters.

This year, we're training a new group of 20 mothers, this time all being mothers of aberrant or ICPS-deficient children. Up to now, the emphasis has been on teaching the child how to think, whether the agent be the teacher or the mother. Based on what we've learned from the correlational data, and that mothers can, in a highly specialized program, transmit such thinking skills to boys as well as to girls, we're now teaching the mother how to think so she can develop a problem-solving style of her own in handling actual problems with her child (a style above and beyond the given guiding dialogues described earlier).
The program results reported today do add to our previous research which showed that a significant portion of the mental health of children is mediated by measurable and alterable ICPS skills, and that it was possible to improve behaviors describing impulsivity and inhibition by enhancing ICPS skills through exposure to a training program at school. We know from follow-up of teacher-trained Ss through first grade that the impact lasts at least two years. The new program demonstrates that mothers of preschool poverty children can also learn to become successful mediators of interpersonal problem-solving skills. However long the impact of teacher-training without further reinforcement, the ultimate effect for a mother-trained child has maximum potential if the mother continues a problem-solving style of communication at home.

References

