TEACHING A PARENT TO TRAIN A SPOUSE IN CHILD MANAGEMENT TECHNIQUES

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This study analyzed several aspects of the training of a mother and father in child management techniques for use with their 6-year-old severely developmentally delayed son. The mother received clinic training in procedures for increasing her son's independent dressing skills; subsequently, she was asked to teach the same procedures to her husband with no assistance from the trainer. For both parents, procedures were introduced sequentially across two components of parent behavior in a multiple baseline design. Examinations were made of (a) the effectiveness of initial child management training on the mother's behaviors, (b) her ability to teach the same techniques to her husband independently, (c) the generalization of both parents' skills from the training setting (a dressing task) to two untrained activities (eating and toy use), and (d) the impact of training on the child's behavior. Results showed that the mother learned to implement the trained procedures and successfully communicated them to her husband, as evidenced by substantial positive changes in both parents' behaviors after being introduced to the child management skills. Both parents showed some generalization to the untrained activities, and their written comments following training indicated they understood the procedures. Clear-cut improvements were observed in the child's attending and independent performance of dressing and toy use skills concurrent with parent training. A 2-year follow-up report indicated that both parents retained their knowledge of skills taught, continued to use the procedures, and rated the training as very helpful in teaching the child self-help skills.

DESCRIPTORS: parent training, generalization, self-help skills, spouse training, severely handicapped child

In recognizing the important role parents play in their children's development, it comes as no surprise to behavioral researchers that parents can be trained to function as effective change agents for their children's behavior (cf. Hawkins, Peterson, Schweid, & Bijou, 1966;

O'Dell, 1974). However, in the great majority of reported cases, this training has involved only one parent in the family—the mother (Grazi-ano, 1977).

Emphasis on the mother as the major recipient of behavioral training can be attributed to the cultural role of mothers as primary caretakers for their children (Lamb, 1975; Patterson, in press) as well as to the practical impediments of including both parents in a training program. Yet training only one parent has an inherent risk. Research had indicated that the durability of child behavior changes often depends on continued delivery of appropriate environmental consequences over time by key members of the child's environment (Forehand & Atkeson, 1977; Stokes & Baer, 1977). If only one parent is knowledgeable in child man-

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agement, it may be difficult for that parent to carry out the procedures consistently once training is over and there is no one to provide feedback or encouragement for the parent's efforts. In response to this concern, Kelley, Embry, and Baer (1979), among others, have advocated the involvement of both parents in the training program.

Although participation of both parents in training appears to have built-in advantages for encouraging generalization of treatment effects, it often is infeasible due to time commitments, extra expenses involved, or reticence on one spouse's part. In cases when only one parent can be available for professional training, perhaps it would be possible to engage that parent as a teacher of the newly acquired skills to his or her spouse. In this way, the benefits of two trained parents could be achieved without requiring both parents to participate in professional training.

The practicality of parents as teachers for their spouses has not been formally addressed in the research literature. A key question concerns the extent to which parents can serve as independent teachers of information following their own participation in a training program. Parents have assisted in the training of other parents under the auspices of professionals (Hall, Grinstead, Collier, & Hall, 1980; Ora, 1971); however, the parents' ability to train others on their own is unclear.

Because of the scarcity of research on the ability of parents to impart newly learned child management information to their spouses or to other parents, the present study was designed to investigate this topic in detail. One parent, a mother, received professional training in behavior modification procedures for use with her son. Investigations were made of her ability to teach these same procedures to her husband without direct assistance from the therapist. Because the child in this study was severely developmentally delayed, training focused on increasing the child's independent self-help skills. In addition, this study examined both par-

ents' extension of the behavioral techniques to situations different from those in which training occurred. Previous research (Forehand & Atkeson, 1977; Miller & Sloane, 1976; Mindell & Budd, Note 1) has shown that generalization of parent training skills across settings or activities often is limited without additional training. Thus, it seems particularly important to evaluate cross-setting generalization when training is provided "second hand" by a spouse.

METHOD

Participants

A couple and their 6-year-old son, Jay, participated. Jay had been diagnosed as evidencing residual encephalopathy (brain damage) and epilepsy with minor motor seizures, as well as having impaired motor coordination, a short attention span, and hyperactivity. Psychological tests indicated that Jay was severely developmentally delayed in all areas. During the course of the study, he received Clonapin and a ketogenic diet (high in fats and low in carbohydrates and protein) for control of his seizure activity, and Ritalin for hyperactivity. Both parents were college graduates; they requested training in handling Jay's noncompliance and inattentiveness, as well as techniques for teaching Jay basic self-help and play skills.

Experimental Settings and Activities

The experiment was conducted through the Meyer Children's Rehabilitation Institute, an outpatient clinic for children at the University of Nebraska Medical Center. Sessions were of two types: (a) *probe* sessions, in which a parent worked individually with Jay on three self-help activities with no instructions or feedback on child management, in order to assess levels of parent and child behaviors; and (b) *training* sessions, in which a parent worked with Jay on a dressing activity and received "in vivo" suggestions and assistance on the application of child management skills.

Probe sessions were scheduled before, during, and after each training condition. Initial baseline probes and those at the end of a condition were typically conducted as three successive sessions; probes within a training condition were only for a single session and occurred after every four training sessions. On two occasions, the number of probe sessions deviated from this schedule. First, only two initial baseline assessments were obtained for the father, due to a malfunctioning of the videotape equipment during a third session. Second, only one probe session was conducted with the mother in the final experimental condition because of previous time commitments of the mother. Training sessions were scheduled approximately three times per week at the convenience of the parents. Both probe and training sessions were of approximately 30 min in length.

All probe sessions were conducted in a clinic room measuring 4.3 m by 3.7 m and furnished with small tables, chairs, and a variety of play materials. A parent was asked to work with Jay on three preplanned activities lasting approximately 10 min each: (a) a dressing task, in which the parent had Jay dress himself using clothes Jay had worn that day; (b) an eating task, in which the parent had Jay feed himself lunch using utensils and food brought from home; and (c) a toy use task, in which the parent encouraged Jay's appropriate use of four simple toys (puzzle, stacking ring, form board, and peg board). The parents never observed each other during these sessions and were specifically asked not to discuss the sessions or the training program with each other until instructed to do so.

Training sessions were held either in the same clinic room as probe sessions or in the living room of the family's home. Training sessions were conducted only for the dressing activity. They consisted of an initial 10 min of observation while the parent had Jay dress himself, followed by 20 min of supervised practice in child management skills. Training for the mother was conducted by the experimenter;

training for the father was provided solely by the mother.

Observation Procedures and Behavioral Definitions

All probe sessions were videotaped, which allowed for subsequent scoring of parent and child behaviors by viewing the tapes. Three coding systems were employed, one focusing on parent-child interactions, one on child attending, and the third on performance of individual steps within the self-help skills.

The parent-child interaction code included some responses that are not reported here because they were not pertinent to the research findings, were very low in rate across the study, or overlapped measures outlined in the text. They consisted of parental repetitions of instructions, negative attention, neutral attention, and child compliance with instructions. A complete copy of all three observation codes is available from the authors upon request.

In the parent-child interaction code, the following parent and child responses were recorded upon their occurrence in continuous 15-sec intervals:

1. *Instructions*—any verbal statement by the parent that directed the child to perform a motor act with a specific beginning and ending. *Appropriate* instructions were considered those given while the child's eyes were oriented toward the parent's face or the task material when the instruction was stated.

2. *Physical guidance*—the parent moved or helped to move the child's body toward compliance with an instruction.

3. *Positive attention*—a physical gesture or verbal comment that indicated parent approval of the child's behavior.

4. *Sustained attending*—the child's eyes were directed toward the task or the parent for 5 consecutive sec during child compliance with an instruction.

5. *Noncompliance*—the child refrained from any active movement toward completion of a

parent request for 10 sec, engaged in behavior incompatible with completion of the instruction, or verbally refused to comply.

A second observation system that focused solely on child attending provided a less stringent measure of visual orientation than was required by the sustained attending definition above. Every 10 sec, the observer recorded whether or not Jay's eyes were oriented toward the parent or the primary task at the moment. This behavior was labeled *Intermittent Attending*.

The third observation system measured performance of component steps within the three self-help skill areas—dressing, eating, and toy use. Each skill was divided into between five and seven steps, as listed in Table 1. Each trial and step was, in turn, coded according to the following criteria:

1. *Independent completion by child*—the child performed the specific step on his own with no physical assistance from a parent.

2. *Partial guidance by parent*—the parent moved or helped to move the child's body through only part of the step, started the child in the right direction, or manipulated the child's body by guiding his forearm from the elbow to the shoulder.

3. *Complete guidance by parent*—the parent moved or helped to move the child's body from the beginning of the step continuously to the end of the step.

4. *Parent preempt*—the parent completed the entire step for the child with no child participation.

Reliability checks were made of each observation coding system at least once during each experimental condition by having a second observer simultaneously but independently record behaviors from the videotapes. To calculate interobserver agreement for each behavior, agreements (intervals or occasions in which both observers scored the same behavior) were di-

Table 1
Skill Steps for each Activity

<i>Dressing</i>	Shirt	1. Pulls shirt over arms
		2. Pulls shirt over hands
		3. Pulls shirt off over head
		4. Pulls shirt on over head
		5. Pulls arm through shirt
		6. Pulls shirt over head
		7. Pulls shirt to waist
	Pants	1. Pulls pants to knees
		2. Pulls pants from knees to ankles
		3. Pulls pants off from ankles
		4. Pulls pants on over feet
		5. Pulls pants from ankles to knees
		6. Pulls pants from knees to hips
		7. Pulls pants from hips to waist
<i>Eating</i>	Fork	1. Grasps utensil
		2. Secures food on fork
		3. Picks fork up
		4. Moves fork to mouth
		5. Moves fork down
		6. Releases fork on plate or table
	Spoon	1. Grasps utensil
		2. Scoops food onto spoon
		3. Picks spoon up
		4. Moves spoon to mouth
		5. Moves spoon down
		6. Releases spoon in bowl or on table
<i>Toy Use</i>		1. Grasps item from parent
		2. Grasps item from table
		3. Moves item to position
		4. Places item in location
		5. Removes hand from item

vided by agreements plus disagreements (intervals or occasions in which either observer scored the behavior), and the quotient was multiplied by 100.

Experimental Design and Procedures

Parent behaviors targeted for change were trained in two phases. Phase one consisted of training on (a) delivering *appropriate task instructions*, and (b) using *any type of physical guidance* after 5 sec of noncompliance to ensure that the child followed through with instructions. Phase two consisted of training on (c)

using a specific type of physical guidance—defined above as *partial guidance*—whenever possible to effect more independent compliance with instructions, and (d) reducing parent *pre-empts* by allowing the child to attempt all steps of the task on his own.

The study employed two multiple baseline designs to evaluate the effects of parent training. One design, across the two sets of parent responses noted above, analyzed the function of clinic training on the mother's use of child management skills. A second design across the same two sets of responses evaluated the mother's training of the father. Training on phase one was introduced sequentially across parents, followed by similar training on phase two. The design allowed for analysis of training effects in the dressing activity as well as in the two untrained activities of eating and toy use.

After initial baseline probes with both parents, phase one training was instituted with the mother. Written and verbal instructions, modeling, and immediate feedback were used in training sessions to increase the mother's appropriate use of the target skills. Although training was provided only in dressing, the mother was told that the procedures she learned should work with Jay in areas other than dressing. Training continued for 12 sessions, until observations of the mother indicated that she had mastered the procedures in the dressing activity. At the completion of training, the trainer wrote, point by point, what was taught to the mother; the mother was also asked to write independently what she had learned from the training.

The mother was then requested to train the father in the phase one procedures, sharing with him everything given or taught to her in training sessions. She was told that the sessions with her husband did not have to follow the same format as her own training, provided the same child management procedures were taught. She was instructed to tell her husband that the procedures he learned should work with Jay in other areas, but she was requested not to provide training in areas other than dressing. The trainer

observed the first few sessions to monitor the mother's introduction of techniques to the father but provided no assistance during training sessions. Training continued for six sessions, until observations indicated the father was applying the procedures correctly. At the completion of training, the mother was asked to write down what she had taught her husband and the father was asked to write independently what he had learned from his wife.

Phase two training was then introduced, first for the mother and subsequently by the mother for the father. Training proceeded in the same manner as for phase one, and involved six sessions for the mother and three sessions for the father.

Two years after the completion of training, the parents were each sent a questionnaire containing 11 items regarding the maintenance of training effects, their satisfaction with the training, and a present assessment of their child's performance. The parents were asked to fill out the questionnaire independently as part of a follow-up evaluation of families served by the clinic's parent training program.

RESULTS

The mean reliability percentages, which averaged above 82% for all but one response category, are displayed in Table 2.

Figure 1 presents the four target behaviors for the parents during dressing probe sessions with Jay. This figure shows that, with few exceptions, parent training resulted in desired increases in both the rates and stability of the target behaviors, regardless of whether training was provided by a therapist (for the mother) or by a spouse (for the father). The least clear effects were those for the two measures of physical guidance on the mother, due primarily to unstable baseline rates for these behaviors. There was a moderate decrease in the level of any physical guidance for the mother following the second training input, which might be expected because the mother was instructed to fade her

Fig. 1. Percent occurrence of target behaviors for the mother and father during probe sessions of the dressing activity. Dotted vertical lines indicate the point at which training was initiated on the behaviors in the dressing activity. Training of the mother was conducted by the therapist; training of the father was conducted by the mother.

Table 2

Mean interobserver reliability in probe sessions across all conditions and activities.

<i>Behavior</i>	<i>Mother</i>	<i>Father</i>
Parent-Child Interaction Code		
Any Instruction	98	96
Appropriate Instruction	91	95
Physical Guidance	95	91
Positive Attention	90	90
Sustained Attending	94	82
Noncompliance	88	86
Child Attending Code		
Intermittent Attending	93	92
Performance of Skills Code		
Independent Completion by Child	88	89
Partial Guidance by Parent	85	67
Complete Guidance by Parent	89	88
Parent Preempt	87	88

physical guidance by using only partial guidance whenever possible.

The extent to which these changes in parent behaviors generalized to the untrained activities of eating and toy use is shown in Figure 2. The pattern for these two activities is in most cases the same for both parents as seen for the dressing activity: initially low to moderate levels of behavior that systematically increased in rate with the introduction of parent training for dressing. However, the bottom two graphs show less consistent changes concurrent with training on dressing skills, especially in eating sessions.

Figures 3 and 4 display child behaviors in probe sessions for the same three activities. Jay's attending and independent completion of steps increased substantially with both parents

Table 3

Experimenter and parent perceptions of skills taught in initial training condition:
Training on appropriate instructions and physical guidance.

<i>Experimenter</i>	<i>Mother</i>	<i>Father</i>
Give clear simple instructions with specific beginning and end.	Instructions must be stated simply with a beginning and end, and involving only one demand at a time.	Keep directions simple. Do not interrupt between direction and response with another request.
If Jay does not respond within 3-5 seconds, physically guide him to complete the task.	If Jay does not respond in 3-5 seconds, parent must follow through.	If Jay does not make the proper response in a few seconds, physically follow through by moving Jay in the proper response.
Instructions are given only if Jay's eyes are oriented to the task or the parent.	Jay must focus on either task or parent, can move Jay's head to look at object or task.	
Remove distractions.	Praise after each step.	Avoid distraction. Show enthusiasm when proper response is made.
Do not change instructions until Jay complies.	Make task as simple as possible by giving Jay more of a chance for success, minimizing frustration. Be consistent—set up routines; time and place and follow them. Break tasks into small steps, teaching step by step.	Avoid frustration—if Jay is having trouble, help him. Carry over same activity into everyday routine, not just in training situation.

Fig. 2. Percent occurrence of target behaviors for the mother and father during probe sessions of the eating activity (denoted by closed dots and solid lines) and the toy use activity (denoted by open dots and dashed lines). Dotted vertical lines indicate the point at which training was initiated on the behaviors in the dressing activity.

in the dressing and toy use activities concurrent with parent training, but few improvements were observed during eating sessions. Noncompliance, which was problematic only for the mother, decreased to a near-zero rate following parent training.

The skills the experimenter intended for the parents to learn, as well as the skills the parents themselves judged they had learned, are shown in Tables 3 and 4. Similar items for the three persons are listed horizontally. The tables show a large overlap in perceptions of training by all three persons and indicate that the parents understood the skills taught.

On the follow-up questionnaire administered 2 years after training, both parents demonstrated continued familiarity with the skills taught. When asked to list in writing the things learned in training, the mother identified six child management skills and the father five skills. Both parents stated that they continued to use the procedures, noting that they were the "best al-

ternatives available" or the "best techniques we've found for working with Jay." They judged it as very important that they both learned the child management skills, citing the importance of consistency for Jay and the large amount of work for one parent as reasons supporting the training of both spouses. Both parents reported that they no longer had difficulty teaching Jay new skills or managing his behavior, and they rated the training as highly beneficial to them.

DISCUSSION

This study adds a new dimension to the behavioral parent training literature by demonstrating that a mother can effectively train her husband in child management techniques after receiving clinic training. Several factors may have facilitated the successful transfer of skills across spouses. Both parents were college educated and interested in learning how to work with Jay. The training program was individual-

Table 4

Experimenter and parent perceptions of skills taught in second training condition:
Training on partial guidance and preempts

<i>Experimenter</i>	<i>Mother</i>	<i>Father</i>
Complete guidance should be used only when partial guidance is not enough for Jay to complete the task. Continue to fade guidance until Jay is doing task with the least amount of guidance or independently.	Allow Jay to do as much of task as possible without guidance—or using as little guidance as possible.	No new procedures learned or skills developed by me. Basically an understanding of the idea of gradually fading out of directions. This was not carried out to the point of no physical guidance. Hopefully, this can be done by further training at home.
Let Jay start/complete a task on his own, giving instructions only when necessary. Allow Jay 10 seconds to respond on his own.	After giving an instruction, now allow 10 seconds for Jay to follow through.	
Assist Jay partially by moving his hand to the task, physically guiding him through part of the task, or holding him between the elbow and shoulder.	After 10 seconds, if Jay fails to do so, follow through, either physically guide him to start task or if necessary, physically guide through entire task.	
If necessary, position hand to ease completion of the task.

Fig. 3. Percent occurrence of child behaviors with the mother and father during probe sessions of the dressing activity. Dotted vertical lines indicate points at which training occurred for the parents in the dressing activity.

Fig. 4. Percent occurrence of child behaviors with the mother and father during probe sessions of the eating activity (denoted by closed dots and solid lines) and the toy use activity (denoted by open dots and dashed lines). Dotted vertical lines indicate points at which training occurred for the parents in the dressing activity.

ized, intensive, and dealt with practical situations the family encountered every day at home. There was no evidence of unusual marital stress between the parents that might have complicated the mother's role as a teacher of her husband. Finally, the observer's presence for occasional training sessions and all probe sessions with the father may have increased the parents' likelihood of following through with the spouse training program. Despite these possible facilitating factors, the present case was by no means a simple one. The child's severe developmental retardation required training of a comprehensive set of management skills and highly repetitive use of the procedures by the parents. Given the successful outcome of this experiment, the spouse training approach merits investigation with families whose children have less comprehensive problems.

Another promising finding in this study was the degree to which both parents generalized their use of child management skills from the dressing task to the untrained activities. The lack of parent transfer to the eating activity may well have been related to Jay's ketogenic diet, which involved the inclusion of oil in all Jay's food. Throughout the study, neither parent would allow Jay to even attempt to pick up the spoon independently, apparently for fear that the needed oil would slip off the spoon. It is likely that complications of the diet were responsible for the lack of change in parent and child behaviors in the eating activity.

Jay's improvements across the study in independent performance of dressing and toy use skills were impressive considering his developmental limitations. Several researchers (Patterson, in press; Price-Bonham & Addison, 1978) have commented on the extreme frustration experienced by parents of handicapped children resulting from their inability to teach skills to their children, coupled with the extensive time demands of a handicapped individual. A parent training program that provides both parents (directly or indirectly) with skills in teaching their child self-help patterns has the potential to

alleviate some of the stress of training a handicapped child and to maximize the child's opportunity to learn needed skills.

A key assumption underlying the rationale of this study is that training both spouses enhances the maintenance and generalization of parent training effects. This research did not experimentally evaluate the value of extending training to both spouses; however, the positive reports obtained at the 2-year follow-up provide supportive evidence that training had an enduring positive impact. Future research is needed to evaluate the feasibility of a spouse training approach with other families, objectively assess the maintenance of this training effect, and identify the extent of observer monitoring needed to ensure that parents follow through with spouse training. Although many questions remain for future study, the successful results of the current experiment suggest that such an endeavor is merited, in order to expand the practical benefits of behavioral parent training.

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