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Training Two Parents for the Price of One: Teaching a Parent to Train a Spouse in Child Management Skills

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TRAINING TWO PARENTS FOR THE PRICE OF ONE:
TEACHING A PARENT TO TRAIN A SPOUSE IN
CHILD MANAGEMENT SKILLS

A Thesis

Presented to the
Department of Psychology
and the
Faculty of the Graduate College
University of Nebraska

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
University of Nebraska at Omaha

by

Susan A. Adubato

August, 1978

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Thesis Acceptance

Accepted for the faculty of the Graduate College,
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requirements for the degree Master of Arts, University of
Nebraska at Omaha.

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Abstract

This study analyzed the training of a mother, through the use of verbal and written instructions, modelling and immediate feedback, to increase the independent dressing skills of her developmentally delayed son. In addition, it analyzed the mother's ability to teach the child management techniques to her husband with no assistance from the clinician, as well as the generalization of parent training to two other child skills - eating and toy use. The parent training package, introduced sequentially across two components of the mother's behavior in a multiple baseline design, led to desired changes in the mother's behavior in the dressing activity and to generalized changes in these same parent behaviors in the other two activities. The mother also was able to successfully train the father in the child management procedures. Examinations of the child's behavior with both parents showed a progressive increase in his independent dressing skills and toy use correlated with successive changes in the parents' behavior; however little change was observed in eating skills. A positive increase in the child's attending to all three activities was recorded concurrent with the introduction of parent training.

INTRODUCTION

In recent years, a considerable amount of research has focused on the training of paraprofessionals in the principles and procedures of behavior modification. Such training has been directed toward educators (Harris, Wolf, & Baer, 1964; Horton, 1975), institutional staff (Gardner, 1972; Panyan, Boozer, & Morris, 1970), counselors (Willis, Hobbs, Kirkpatrick, & Manley, 1975), high school and college students (Gladstone & Sherman, 1975; Kreitzer, 1966), children (Long & Madsen, 1975; McLaughlin & Malaby, 1975; Warren & Baer, 1976) and even residents in mental institutions (Craighead & Merciantonis, 1973; Ludwig, Marz, & Hill, 1971). These groups have been trained to reduce classroom problems (Becker, Madsen, Arnold, & Thomas, 1967), to serve as reinforcing agents (Seigel & Steinman, 1975) and to effectively train other paraprofessionals (Hall, Ayala, Copeland, Cossairts, Freeman, & Harris, 1971; Jones, Fremouw & Carples, 1977).

The research mentioned above is but a fraction of numerous studies involving the training of paraprofessionals, showing how useful and successful such endeavors can be. Some of the most extensive research in this area by far is the training of parents in the use of behavior modification (Berkowitz & Graziano, 1972; Cunningham, 1975; Johnson & Katz, 1973; O'Dell, 1974).

In recognizing the important part parents play in the child's behavioral development (Hawkins, Peterson, Schewid,

& Bijou, 1966), it should come as no surprise to anyone that parents are quite capable of functioning as change agents for their children. Through training, parents in general and mothers in particular have learned to use differential attention (Hawkins, 1966; Wahler, Winkel, Peterson, & Morris, 1965; Zeilberger, Sampen, & Sloane, 1968) and timeout (Wahler, 1969); an "emotionally disturbed" mother was able to eliminate her child's excessive, self-injurious scratching behavior (Allen & Harris, 1966). Many other examples are available in the parent training literature (Forehand & Atkeson, 1977).

A somewhat recent development in the parent training field, and one that is quite worthy of attention, is the employment of parents to train other parents in the use of behavior modification. An extensive and interesting project now in progress is the Regional Intervention Program (RIP), taking place in Nashville, Tennessee (Elder, Note 1). RIP is a program implemented and maintained by parents. It provides services to handicapped preschoolers and their families, with the main goal being to train parents effectively to teach their children. While parents are the main impetus and manpower behind the program, there is an evaluation committee composed of parents and consultants (including professionals in psychology, pediatrics, psychiatry, special education and child development) to be sure that the services

are satisfactory. Activities and progress toward objectives are continually measured empirically and modified. Organized by modules, the parents and their children are assigned to specific modules, according to the child's needs. Each module, in turn, is run by parents who have gone through similar problems with their own children. If the incoming family has other pressing needs to be met, the module coordinator (usually a Master's level professional) will alert the necessary support modules, thus quickly activating a massive effort from the different teams of trained workers.

Home visits are also available in RIP. Where indicated, a trained and competent mother will visit a family's home in order to take additional data and provide the necessary training. Here, parents are taught to generalize what has been learned in the clinic to problems they are experiencing in the home.

The efficacy of such a parent-implemented program is obvious: when properly trained, parents can become a continuous treatment source for their children by implementing behavioral procedures in the home, thus freeing professionals for other duties. In programs such as RIP, participating families are not only able to help themselves but they are also able to share their knowledge and experiences with other families in similar situations.

Noticably absent, yet deserving more attention than accorded him in the past, is the father's part in treatment and training in programs such as RIP. RIP mentions that once

a mother has learned to record and present the training stimuli, she does teach the father, as she herself was taught, how to record the sessions. However, no other mention is made of the involvement of the father in the child's treatment (Elder, Note 1).

The father often is considered a secondary person in parent-child relationships (Price-Bonham, 1976), quite possibly because of his limited availability. Traditionally, it has been the mother who cares for the child while the father goes off to work. Even in recent years when many more women are employed outside the home, the bulk of child care responsibilities still fall to mothers. Yet the importance of the father in the child's development must not be overlooked. Regardless of availability, the father still is involved in some daily interactions with his children and exerts considerable influence over his children's behavior.

Although the use of behavior modification with parents has been described extensively in the literature, only a negligible amount has referred to its use with the father. Engeln, Knutson, Laughy and Garlington (1968) describe their study in which the father became involved almost by accident. They were working with the mother and her disruptive son, when the father, in viewing one laboratory session, became quite pleased with the progress he was seeing. He then agreed to cooperate in the program his wife had started at home, and

his wife reported that her husband soon became an active participant in the home program.

The emphasis of parent training, whether it involves one or both parents, deals with changing the child's behavior. Yet an interesting and little researched area concerns the type of interactions needed between parents in order to insure compatible treatment of the child by both parents. In one of few studies addressing this topic, Kelly, Embry and Baer (1978) investigated spouses' ability to support each other in the treatment of their children. Part of the study was devised in order to allow the spouses to deal effectively with marital differences in child management, as well as the ability to negotiate child management rules that both parents could agree to follow. Trained simultaneously, both spouses were able to increase the occurrence of positive, reciprocal family interactions, which the authors suggest may have contributed to the maintenance of desirable changes in the child.

While emotional support between spouses is a necessary and vital part in the treatment of the child, its effectiveness diminishes without active involvement of both spouses in that treatment. Stokes and Baer (1977), in their review of the generalization literature, point out that it is folly to expect a child's behavior to improve in all situations when behavioral treatment procedures are used only by one adult in the child's environment. Rather, a child needs to be exposed to consistent consequences in order to generalize a new, more

acceptable pattern of behavior. Thus, if only one parent in a family receives training in child management techniques, it is important that the trained parent be able to impart the basic components of that training to his or her spouse.

Because of employment commitments, it often is impossible for both spouses in a family to come to a clinic for the professional help they need to deal with their children's special needs. However, one parent (often the mother) may be able to arrange for training. Does it not follow that, if the trained parent is able to transfer skills in the clinic to the other parent, this would result in an optimal learning environment for the child? This was the purpose of the present study: to examine the possibility of training one spouse in the use of behavior principles so that spouse would be able to train the other. If such an endeavor were possible, it would also provide the child with maximal learning opportunities in his natural environment, the home.

The scarcity of published articles in the research literature dealing with both parents bespeaks the need to broaden the technology of behavioral parent training to include both spouses in the nuclear family. RIP (Elder, Note 1) shows the success of parents' ability to train other parents. The present study attempted to extend and clarify the extent to which the father was able to become involved in his child's treatment. Because of her availability, the mother was the first parent trained, under the direction of a clinician

experienced in behavior modification techniques. After training, the mother then trained the father in all the procedures she had learned, in order to ascertain whether such training was feasible and effective.

Because of the parents' expressed concern, the main area of this study focused on increasing the independent self-help skills of their developmentally delayed son. Very few parent training studies have addressed the teaching of self-help skills to children (Lance & Koch, 1973), but it would seem to be an important and necessary area for parents of severely delayed children. After training the mother in procedures for increasing one self-help skill, this study examined the generalization of parent behavior to other self-help skills for which the mother received no direct training. In addition, it investigated the changes in child behavior correlated with parent training.

METHOD

Subjects

A couple and their 6-year-old son, Jay, served as subjects. Jay had been diagnosed as evidencing residual encephalopathy and epilepsy with minor motor seizures. Medical reports indicate that at about 22 months of age, Jay fell in the locker room of a swimming pool and hit his head. He appeared at first to be fine, but had since evidenced seizure activity, impaired motor coordination, short attention span, hyperactivity, distractability, and significant developmental delays in all areas of social, cognitive, and academic functioning. The parents, however, were told by their doctor that some of Jay's problems were in all likelihood caused by additional undiagnosed factors. Several medications were prescribed by the family pediatrician for the control of the seizures and have since been tapered and discontinued. During the course of the study, Jay received Clonapin and a ketogenic diet for control of his seizure activity as well as Ritalin for his hyperactivity.

At the onset of the study, Jay was enrolled in the Nursery School at Meyer Children's Rehabilitation Institute. During the course of the experiment, he transferred to the Chap School, a special education facility for moderately to severely handicapped children.

Jay and his parents were referred to the parent program by the nursery school teachers in order to help the parents

deal with Jay's behavior at home. The parents recognized that Jay's inappropriate behaviors (overactivity, poor attention span, and distractability) would have to be brought under control if Jay were to receive maximum benefit from his educational placement.

Both parents were in their early thirties. The father was an officer in the United States Air Force, and was completing his Master's degree in Business Administration. The mother, holding a Bachelor's degree in elementary education, was a housewife. In addition to Jay, the parents also had a 3-year-old son who appeared to be bright and well behaved.

Experimental Settings and Activities

There were two experimental settings for this study: a classroom located at Meyer Children's Rehabilitation Institute, and the family's home. The classroom served as the probe setting for both parents and Jay, as well as the initial training setting for the mother. Once Jay began to attend the Chap School, however, it was easier to conduct training sessions in the family's home, using the family's living room for the sessions. The classroom measured 4.3 by 3.7m and was furnished with one large round table, three smaller tables and an assortment of chairs. The family living room measured 4.5 by 6.1m and was furnished with one couch, a coffee table and two cushioned chairs. Sessions were conducted in the early afternoon, 3 to 5 days a week, for 30 minutes per day.

Probe Sessions

During probe sessions, a parent worked individually with Jay on a series of three activities: dressing, eating and toy use, with no specific instructions on child management from the experimenter. Approximately 10 minutes was devoted to each activity.

Dressing Probes. The parent was asked to have Jay dress himself, with parental assistance as was normally done in the home. The materials for this activity consisted of Jay's own clothing, including outer pants, a pullover shirt, an undershirt, and underpants. Jay's shoes, socks and belt (if worn) were removed in order to facilitate dressing during these sessions.

Eating Probes. The parent was asked to prepare Jay's lunch in advance and to let Jay feed himself during the session, with parental guidance as was normally done in the home. Jay's parents brought in food that was allowable on Jay's ketogenic diet, as well as the necessary plates, bowls, cups and utensils.

Toy Probes. The parent was told to follow whatever means they would normally use in order to teach Jay how to use a selected toy. The group of toys selected for the toy probes consisted of 5- and 6-piece puzzles with no interlocking pieces, a multi-colored stacking ring consisting of 11 rings of graduated sizes, a form-box in which 3 blocks each of different

shapes were "mailed" into 5 appropriately shaped slots, and a jumbo peg board consisting of 6 large round pegs to be placed in 6 round holes on a square board.

Training Sessions

During training sessions, child management techniques were introduced to a parent in an effort to increase Jay's independent skills. Training for the mother was conducted by the experimenter; training for the father was carried out by the mother. These training sessions were conducted only for the dressing activity.

Approximately 10 minutes was devoted to recording parent and child behavior at the beginning of the session. During this time, the parent was asked to have Jay dress and undress, with physical guidance as needed. The remaining 20 minutes was devoted to training of child management skills to promote more independent dressing for Jay. All dressing materials utilized in the training sessions was the same as described above for the dressing probe sessions.

Observation Procedures and Behavioral Definitions

Data on Parent-Child Interactions

An observer, equipped with a clipboard and stopwatch, recorded parent and child behaviors in continuous 15-second intervals.¹ These data were recorded from videotape recordings of probe sessions, and in vivo during training sessions in the first treatment condition.

The following parent behaviors were recorded:

Instructions: Any verbal statement by the parent that directed the child to perform a motor act with a specific beginning and ending. Instructions were very specific, telling the child exactly what he should do. They excluded all "don't do that" statements and other instructions that requested the termination of a response and/or had no specific beginning or ending response. Instructions as defined above took two forms:

Appropriate Instructions: The child's eyes were oriented toward the face of the parent or the task materials for all or part of the time the instruction was being given.

Inappropriate Instructions: Instructions, as defined above, were given in the absence of the child's visual orientation to the face of the parent or the task materials.

Only the initial instruction was recorded in the grid for each 15-second interval.

Repeat of Instruction: Any time the parent restated all or part of the initial instruction. Only a repeat was recorded, regardless of the tone of voice and/or whether prompts were included in the same sentence. Pointing was considered a repeat if pointing was used in the initial instruction.

Physical Guidance: Following an instruction by the parent, the parent moved or helped to move the child's body, either totally or partially, in order for the child to comply.

Attention: There were three general categories

of parental attention: positive, negative and neutral. All physical or verbal parent behavior toward the child, excluding instructions, repeats, and physical guidance, were scored as parent attention. The three forms of attention could follow any of the child behaviors.

Positive Attention: The parent gave physical or verbal approval to the child. Physical positives included kissing, hugging, stroking, etc. Verbal positives were comments directed to the child that praised or encouraged the child and/or were said with an approving, accepting, or favorable tone of voice. It also included clapping for the child if it was contingent on a specific child response.

Negative Attention: Parent expressed physical or verbal disapproval of the child's behavior. Physical negatives included hand slapping, rough physical movement of the child from one area to another, or any other motor attack on the child by the parent. Verbal negatives were comments that scolded, belittled, or threatened the child and/or were said with an angry tone of voice.

Neutral Attention: Physical neutrals included all instances of parent initiated contact with the child or his materials that were not clearly positive or negative, including restraining the child in a seated position while neither praising or punishing him. Verbal neutrals included comments which were not clearly positive or negative, or

simply a verbal interaction with the child.

Negative attention took precedence over neutral attention, and positive attention took precedence over both neutral and negative attention.

The following child behaviors were recorded:

Compliance: When the child actively made some movement toward following the parent's instructions, or when no demand was placed on the child for the entire interval and the child was neither aggressive nor disruptive. A separate symbol was used to distinguish compliance that occurred independent of any parent physical guidance; unassisted compliance was scored whenever the child made any approximation and/or active movement to comply with the instruction or made any appropriate manipulation of objects.

Noncompliance: After the parent gave an instruction to the child, the child was noncompliant if he failed to actively move toward complying for 10 seconds during the interval (passive noncompliance). Noncompliance also was scored when the child engaged in one task when asked to do another (active noncompliance). For passive noncompliance, the child was scored as noncompliant only within the interval in which the instruction was given. For active noncompliance, the child was scored as noncompliant beginning with the interval in which he began the behavior and was scored as noncompliant for the next three intervals, providing no new instruction

or repeat was given.

Noncompliance took precedence over compliant behavior.

Eye Orientation: Occasions when the child's eyes were directed toward the task and/or the parent for five consecutive seconds while the child was complying, with or without parent assistance, to instructions.

Attending: In order to obtain additional information on the frequency of the child's visual attending to the task, a simple code was devised to collect data from videotape recordings of the probe sessions. Every 10 seconds, the observer looked at the child on the videotape and ascertained whether or not his eyes were oriented toward the parent or the primary task at the moment. These data were recorded separate from the other parent and child behaviors described above.

Data on Child Performance Self-Help Skills

An additional observation code was devised in order to assess the progress made by the child in the skills to be investigated.² These data were collected from videotapes of the probe sessions, and in vivo during the second treatment condition.

Each skill was divided into a certain number of small steps necessary to complete the total skill. These steps were developed through consultation with several sources, including Minge and Ball (1971), Ford (1975) and Morris (1976). The steps are listed in Table 1. A trial began when the first step was initiated by the parent and/or child. Each trial and

step was, in turn, coded according to the following criteria:

Pre-empts - Parent Completes Step For The Child: Scored when the parent independently completed the step for the child without the child's assistance.

Child Completes The Step Independently: Scored anytime the child completed the specific step on his own, without the parent's aid.

Parent Completely Guides The Child: Scored if the parent moved or helped to move the child's body from the beginning of the step continuously through to the end of the step in order for the child to comply.

Parent Partially Guides The Child: This was scored if the parent moved or helped to move the child's body through only part of the step, if the parent started the child in the right direction, or if the parent manipulated the child's body by guiding his forearm from the elbow to the shoulder.

A skill did not have to be completed in order for steps to be scored. The only criteria was that step one be initiated.

Reliability Procedures

Reliability observations were made at least once during each videotape probe condition and during the first training condition for the mother. Because of lack of availability, it was not feasible to obtain reliability in the home for both parents during in vivo training sessions. The observers sat side by side and recorded the behaviors independently at a distance of approximately three feet from the parent and child.

An attempt was made to ensure the same distance from observers to subjects as well as the same proximity between observers throughout the study. When recording from videotapes, observers viewed the tapes together, and independently recorded behaviors, as they did during training sessions in the classroom.

The observers' records were compared, interval by interval, for each category of parent child behavior. To calculate inter-observer reliability for each category, agreements (total number of intervals in which both observers scored the same behavior) were divided by total agreements plus disagreements (total number of intervals in which either observer scored the behavior), and the quotient was multiplied by 100 to produce a percentage of agreement.

Observer reliability for each skill step was calculated in the same way as described above. Total interobserver agreement (total number of all skill steps in each behavioral category in which both observers recorded the behavior) was divided by total agreements and disagreements (total number of all skill steps in each behavioral category in which either observer recorded the behavior); multiplied by 100.

Design, Experimental Conditions and

Scheduling of Probe Sessions

The purpose of this study was fourfold: (1) to evaluate the effectiveness of a professional training package for modifying two components of a mother's behavior; (2) to examine the mother's ability to modify these same behaviors in her

husband; (3) to examine the generalization of the parents' use of newly trained procedures from the dressing activity to two other, untrained activities; and (4) to evaluate the changes in child behavior correlated with each aspect of parent training. Two multiple baseline designs were utilized in order to investigate these issues.

The first multiple baseline design was across two sets of mother behaviors- (1) appropriate instructions and physical guidance, and (2) pre-empts and fading of guidance - in order to evaluate the effectiveness of the experimenter's training on her behavior. Correlational effects on father-child interaction, the mother's use of the skills in the other untrained activities (eating and toy use), and on Jay's behavior also were evaluated. As part of the training package, the mother was told that the procedures she learned should work with Jay in areas other than dressing; however, she did not receive any training or feedback in these areas.

A second multiple baseline design was employed with the father across the same two sets of parent behaviors, in order to evaluate the effectiveness of the mother training the father to work with Jay in the area of dressing. Evaluations also were conducted of the correlational effects of training on Jay's behavior and the father's behavior in the other untrained activities. The father was told by the mother that the procedures he learned should work with Jay in areas other than dressing; however, the mother provided no training on these activities for the father.

The sequence of experimental conditions across this study are presented in Table 2. As this table shows, a total of four training conditions were conducted: two by the experimenter training the mother, and two by the mother for the father. Initially, the mother received training in one area: increasing appropriate instructions and physical guidance. Then the mother trained the father in these procedures. After training was completed, the mother received training in the second area, decreasing pre-emptive and fading physical guidance, and subsequently trained the father in these techniques.

Insert Table 2 Here

Training always took place in the self-help area of dressing. Periodic examinations were made via probe sessions to ascertain whether the procedures taught generalized to a similar self-help skill (eating) and/or to a non-similar skill (toy use). These probe sessions were scheduled during an initial baseline condition, at periodic stages during training, and at the end of each experimental training condition. Each probe period in baseline and at the end of training conditions consisted of three consecutive probe sessions for each parent, with each probe covering the three child activities (dressing, eating and toy use). However, because of time commitments, only one probe session was scheduled for the mother once she had trained the father in the final procedures

of this study. In addition, one probe session was conducted every seventh session (in the initial training of the mother) and every fourth session thereafter for both parents within a training condition.

Procedures

At the beginning of the study, the mother was told not to share any information, feedback or training with the father until she was instructed to do so. It was explained to her that the experimenter wanted to be sure she was using the procedures correctly before she taught them to anyone else. The father also was asked not to inquire about his wife's training until she was ready to train him.

Mother-Child Sessions

Baseline: Sessions 1-3. For three sessions, the mother was asked to work with Jay for approximately 10 minutes on each of the following activities:

Dressing- The mother was told to do what she normally did in order to get Jay dressed.

Eating- The mother was told to do what she normally did in order to get Jay fed.

Toy Use- The mother was told to use whatever means she normally would in order to teach her son how to use a selected group of toys.

No instructions or feedback regarding the mother's behavior were provided during this condition.

Training on Appropriate Instructions and Physical Guidance:
Sessions 4-11. During this condition, the mother was asked to teach her son to become more independent in his dressing skills. In order to simplify this task, only shirts and pants were used. Shoes, socks, and belts were removed before sessions began. Training focused on the following topics:

1.) The mother was asked not to give an instruction to Jay unless his eyes were oriented toward the task or the parent's face while the instruction was being given. The mother was told that this would increase the likelihood of Jay's compliance with the instruction and attention to the task.

2.) The mother was told to give clear, unambiguous instructions that clearly indicate what is expected of Jay. She was also told not to change demands once a demand was given if Jay had not yet complied. This procedure was to ensure that Jay understood exactly what to do, thus minimizing frustration and providing Jay with a greater chance for success.

3.) The mother was told to remove all distracting stimuli that were not necessary to complete the task so that Jay would not become confused about task expectations.

4.) If Jay did not comply after the appropriate time had elapsed (allowing at least 5 seconds), the mother was told to follow through with the instruction by physically guiding the child to complete the task. The mother was told to do this for two reasons. First, Jay might not know how to complete the

instruction and, therefore, needed guidance; second, it may have been that Jay did not want to complete the instruction. By physically guiding Jay through the task, he would soon realize that he was not able to escape from completing the task.

This phase of training, as well as all subsequent training, was initially introduced in a written explanation that described and clarified the reason for using each point as described above. Any questions the mother might have concerning the new procedures were answered after she had read the entire explanation and/or before or after any subsequent dressing teaching sessions. Once the new techniques were introduced to the mother, modelling and immediate verbal feedback on her use of these procedures were implemented. Feedback was also given while the mother was working with Jay in the training sessions (for example, "help put his thumbs in his pants," "that's right, you got his attention before giving the instruction"), as well as after the sessions. Modelling by the trainer was used when needed in order to help the mother use the procedures with Jay. Handouts from selected books³ were also provided and explained to the mother in order to help her learn how to use the above procedures.

Training in the above procedures occurred in the area of dressing. The mother was told that the procedures she was learning should work with Jay in areas other than dressing.

At the completion of the first training condition, the trainer wrote, point by point, what was taught to the parent in this treatment condition. The mother was then asked to write, in her own words, what she felt she had learned from the training. Neither the mother nor the trainer read each other's comments prior to making their own lists.

Training on Pre-empts and Fading Guidance During Dressing: Sessions 12-16. In this treatment, the mother was trained to decrease her pre-empts by requiring Jay to attempt all steps of each skill and to gradually reduce her physical aid as much as possible. This training was conducted in the following manner:

1.) The mother was told to give Jay a chance to complete each step of the task on his own, and never to complete steps for him. She was not to repeat or give a new instruction unless Jay did not continue to complete the task or become distracted.

2.) Once an instruction was given, the mother was asked to give Jay at least 10 seconds to respond. If Jay paused during the task, the mother was told to prompt his compliance by a.) moving his hand to begin the task; b.) physically guide Jay to start the task; or c.) if necessary, guide Jay by holding his arm between his elbow and shoulder. If Jay was struggling through the task, she was told to position his hands in such a way to ease the completion of the task. (For example, if Jay was trying to pull down his pants, but was having

problems, she was told to position his hands in back, palm in pants, to help him.) She also was told to continue to fade her assistance by guiding Jay through less and less of the behavior, until Jay was emitting the behavior with a minimum of prompts, or even in the absence of prompts.

Complete guidance was to be used only when absolutely necessary. The above defined partial prompts were to be used first and if these did not work, complete guidance was then used.

As with the previous training condition, the mother was told that these procedures should work with Jay in other areas as well; However, training was provided only for the dressing activity. At this point in the study, the mother was asked to write what she felt she had been taught by the experimenter. In the same token, the experimenter wrote what she taught the mother.

Father-Child Sessions

Baseline: Sessions 1-5. The baseline for the father was the same as described for the mother. The only difference was that the father's baseline period continued through the first training condition of the mother.

Training On Appropriate Instructions And Physical Guidance: Sessions 6-12. At the beginning of this condition, the trainer first sat down with the mother and discussed the following:

1.) The trainer would have no feedback/teaching contact with the father; all contact would be through the mother. If

any problems arose, the trainer would be available at any time during the study to help the mother (the trainer also reminded the father of this first point).

2.) The mother was told that she could now share with the father everything given her or taught her in the training sessions. This included all instructions, written handouts, modelling and verbal feedback.

3.) She was told to work only on dressing, explaining that while there may be other areas in which the father needed help, the concentration would be on dressing and the procedures taught to her. She was told to tell her husband that these procedures should work with Jay in other areas.

4.) The mother was told that the trainer would observe two or more of her initial training sessions with her husband in order to ascertain if she is correctly using the procedures and to monitor problems.

5.) She was asked to keep a log of each session with her husband. The sessions did not have to follow the clinic training, providing the same procedures were implemented.

The trainer was available throughout this time if any problems arose. When the father's use of procedures stabilized, he was asked to indicate in writing what he felt he had learned from his wife. The wife, in turn, was asked to write what she felt she had taught her husband. Both were also asked, independently, to note any problems, arguments, etc. that occurred.

Training on Pre-empts and Fading Guidance During Dressing:

Sessions 19-24. The pattern of training was the same as that described for the mother. The only difference was that the mother, rather than the experimenter, trained the father in these procedures. The same points were discussed with the mother prior to her initiating the training as had been done with the previous training condition. Again, training occurred only in the area of dressing. If any problems arose, the trainer was available at all times. At the completion of this training period, the father was again asked to indicate what he felt his wife had taught him and she, in turn, was asked to write what she had taught her husband.

RESULTS

Reliability

The ranges and means of the reliability percentages for each behavior of interest are displayed in Table 3 for parent behaviors and Table 4 for child behaviors. No ranges are provided for those behaviors in which the percentages of agreement was identical throughout the study and/or when no instances of behavior were recorded in a particular activity. With few exceptions, the mean percentage of interobserver agreement within conditions and activities for all behaviors ranged between 80% and 100% for the mother, and 75% and 100% for the father. The low percentages of agreement obtained for some behaviors in some conditions were due primarily to low rates of behavior (often 1-3 instances of that behavior), thus having fewer opportunities in which to record that behavior. For example, the 0% obtained for the father's physical guidance occurred when one instance of the behavior was involved.

Insert Table 3 and Table 4 here

Mother-Child Probe Sessions

Figure 1 presents the mother's behavior in probe sessions with her son, Jay. The top left graph presents the rate of appropriate instructions, calculated as the

percentage of total instructions given during the dressing activity. Baseline data show the mother's rate of appropriate instructions to be relatively stable, with a mean of 58% of total instructions. Following the implementation of training on instruction giving, the mother's rate of appropriate instructions increased and stabilized at an average level of 92% for all subsequent probe sessions.

Insert Figure 1 here

The top graph on the right in Figure 1 shows the level of the mother's physical guidance during dressing, calculated as the percentage of total intervals observed for each session. Baseline showed a steadily increasing trend, averaging 15%. After training was initiated, the mother systematically increased her guidance to a mean rate of 62%. A slight decrease in the level of guidance, to an average of 42%, occurred after the second training input, when the mother was asked to give Jay every opportunity to complete steps on his own and fade out her use of physical guidance.

The second graph on the left side of Figure 1 displays the percentage of steps in which the mother refrained from pre-empting her child by performing the task for him, calculated as the percentage of total steps. During baseline, the rate of not pre-empting Jay increased gradually across probe sessions but stabilized as a level of 76% for the last four pre-training sessions. Once direct training

on eliminating pre-empts was introduced, she maintained a high stable rate of 94% for the remainder of the study.

The second graph on the right side of Figure 1 displays the frequency of steps on which the mother provided partial guidance, calculated as a percentage of total guidance. During baseline, the mother's rate of partial guidance was highly variable, ranging between 0% and 100%, with a mean of 30%. Training on fading of guidance led to a further increase in this behavior to a mean of 52% of total guidance.

The extent to which these changes generalized to the activities of eating and toy use are shown in the bottom half of Figure 1. The solid lines with the enclosed circles display the percentages for eating sessions, while the dotted lines with the open circles display the toy use sessions. The pattern for these two activities are basically the same as seen in the dressing activity for the top two graphs: initially low levels of behavior that systematically increased in rate with the introduction of the parent training package for dressing. However, the bottom two graphs show less consistent changes concurrent with training on dressing skills, especially in regard to eating sessions. On one behavior, refraining from pre-empts during toy use sessions, the mother was already performing at a virtually perfect level and had no room for improvement. A slight increase occurred in her use of partial guidance during toy use sessions, but no change was observed during eating sessions.

The graphs in Figure 2 display child behaviors in probe sessions with the mother. Breaks in the solid lines signify when a new treatment condition was introduced. The top graphs display the percentage of Jay's attending behavior, calculated as a percentage of total intervals. The graph entitled "sustained attention" refers to the frequency of intervals in which Jay was oriented toward his mother or the task for 5 consecutive seconds during each interval. The graph entitled "intermittent attention" displays the level of Jay's attending when observed every 10 seconds during the sessions. During baseline, the length of Jay's attending steadily decreased to a mean of 16%, but once treatment was initiated, this increased somewhat until the fifth session, in which a substantial increase occurred, raising the mean to 65% for the last 9 sessions. An examination of the frequency of Jay's attending behavior showed a stable mean of 39% during baseline, which was further increased with the initial treatment input to a mean of 64% for the remainder of the study.

Insert Figure 2 here

The second graph on the left side in Figure 2 displays Jay's independence in dressing, calculated as

a percentage of total steps in dressing. Jay's behavior was quite variable during baseline, with rates between 11% to 44%, averaging 21%. A slight increase occurred after initial treatment, and this was further increased to 62% when the mother was told to eliminate her pre-empts and fade out her guidance. The second graph on the right side of Figure 2 displays the rate of Jay's noncompliance, calculated as a percentage of total intervals during dressing. After an average rate of 32% during baseline, this rate decreased to a stable 0% for the remainder of the study.

The bottom graphs in Figure 2 display the above mentioned behaviors for eating and toy use sessions. The pattern for these behaviors during toy use sessions is the same as during the dressing activity: initially low rates of behaviors, followed by a systematic increase (or decrease in the case of noncompliance) in their rate once the parent training package was introduced. However, little stable change in child behavior occurred during eating sessions, concomitant with less generalization of parent behaviors to this activity.

Father-Child Probe Sessions

The graphs in Figure 3 display father behavior in probe sessions with his son, Jay, for the same behaviors

as displayed for the mother. The break between Sessions 2 and 3 signifies the mother's training period: Sessions 1 and 2 were taken before any training occurred with either parent and Sessions 3-5 occurred after initial training of the mother but before any training of the father. With few exceptions, the graphs display the same pattern as that for the mother, except that they are more pronounced: very low behaviors during baseline with clear, marked increases in rate once the treatment package was introduced directly to the father.

There are, however, a few exceptions. Baseline was very variable and quite high for the father's rate of appropriate instruction giving, but quickly increased and stabilized, following training, across all three activities. Also, no increase occurred in the father's use of partial guidance when training on this behavior was initiated during dressing; however, Figure 4 (discussed below) shows that such a change was not possible, due to an increased rate of Jay's completing steps on his own in this condition. In spite of the lack of change on partial guidance during dressing, there was, following training, some decrease in the level of this behavior during eating and toy use sessions, with less systematic generalization to eating sessions than toy use sessions.

Insert Figure 3 here

The graphs in Figure 4 display the child's behavior in probe sessions with his father, as were described by the mother. The breaks between the solid lines indicate when treatment was initiated with the mother and the father: Sessions 1 and 2 were before any training of either parent occurred; Sessions 3-5 occurred after training with the mother began, but before training of the father; Sessions 6-12 occurred during and after initial training of the father, and Sessions 13-15 occurred at the conclusion of this study, after the final training of the father occurred. Dressing sessions saw Jay's attending behavior to be low during baseline, especially for his sustained attending behavior, with no improvement as a result of training for the mother. However, once the mother began training the father, both behaviors quickly increased to an average of 53% for his sustained attention and 70% for his intermittent attending for the remainder of the study.

Insert Figure 4 here

Jay's independent dressing skills were very low during baseline, averaging 11%, but quickly increased to a rate of 44% after the initial training component for the father, and remained high for the remainder of the study. Jay's noncompliance during dressing sessions was always very low with the father, averaging only 6% in baseline and 1% for the remainder of the study.

The bottom graphs in Figure 4 display the percentages of the above mentioned child behaviors for eating and toy use activities. Both activities showed an increase in rates of Jay's attending once treatment was introduced, and continued low levels of noncompliance. However, while Jay showed a progressive increase across the study in the proportion of steps completed independently in toy use sessions, he exhibited only a temporary increase during eating, with a decline to baseline levels during the final condition.

Mother and Father Training Sessions

While training sessions⁴ for the mother show a gradual increase in the desired behaviors, sessions for the father show a more rapid rate. A total of 18 training sessions were implemented with the mother in order to increase Jay's dressing skills, 12 during the initial training component and 6 during the second component. For the father, only 9 training sessions were needed, 6 on the first component and 3 on the second. Training was considered sufficient for a component when a stable improvement in the target parent behaviors occurred during data collection periods of the training sessions and probe sessions.

Parent Expression of Skills Learned in Training

The skills the experimenter intended for the mother

to learn, as well as the skills the mother herself felt she had learned, are shown in Table 5 for the initial component of the parent training package and Table 6 for the second component. Also included are the skills the father felt had been taught him by the mother. The tables are set up as follows: the first column in the table displays the skills the experimenter felt she had taught the mother; the second column, what the mother thought she had learned from the experimenter, as well as what she had taught the father; the third column displays the skills the father felt he had learned from his wife. Similar items in the three columns are listed horizontally across the table. Each entry is listed in the words of the parent or experimenter who offered the comment.

These tables show a large overlap in perceptions of training by all three persons, especially on the initial training components. An interesting point to note is that both parents thought praise had been taught, while the experimenter had not specifically trained this. Also, both parents indicated other important variables, such as consistency in dealing with Jay as well as the importance of incorporating the trained activities into everyday routines. No incorrect techniques were mentioned by either parent.

 Insert Tables 5 and Table 6 Here

DISCUSSION

The present study demonstrated: 1.) a parent training package consisting of written instructions, immediate verbal feedback and modelling was effective in teaching a mother to increase her son's independent self-help skill of dressing; 2.) the mother was able to successfully teach the procedures she learned to her husband without the experimenter's assistance; 3.) both parents generalized their use of these procedures to the toy use activity and, to a lesser extent, to the eating activity; and 4.) training led to clear improvements in their son's attending in all activities, and to additional child changes in some activities as well. The parents were specifically taught to 1.) get Jay's attention before giving instructions to him and assist Jay when necessary in order for him to complete the task; and 2.) decrease their pre-empts by requiring Jay to attempt all steps of the task and fade out assistance when Jay's skills improved. Both experimenter training of the mother and , subsequently, mother training of the father were introduced sequentially in a multiple baseline design across the two components of parent behavior. By conducting training in this fashion, it was evident that the introduction of training was responsible for observed changes in parent and child behaviors.

This study adds a new dimension to parent training literature by demonstrating that one parent can effectively

train his or her spouse after receiving professional training. Too often, behavioral parent training deals with the training of only one mother in order to modify her child's behavior (Allen, 1966; Hawkins, et.al., 1966; Shah, 1969). More often than not, the reason for this is her availability to come into the clinic for treatment. Stokes and Baer (1977) have discussed the problems in assuming that a child's behavior might improve in situations in which only one adult has implemented the treatment procedures, without active, consistent involvement of all significant others in the child's environment. Kelly, Embry and Baer (1978) have addressed this problem as it relates to families by exploring ways of training both parents in compatible treatment of the child by both parents. With the aid of both parents, the child's treatment not only would be able to continue 24 hours a day without the need of a clinician, but the therapeutic process would not be limited to the mother alone. The present study extends this technology further, by demonstrating that one parent, after training by a clinician, can very successfully train his/her spouse with little or no professional assistance.

Researchers have found that generalization to different settings, activities and times does not occur as often as one would like. Forehand and Atkeson (1977), in their review of generality of treatment effects, have shown that data on the possible generalization of procedures from clinic

to the home is obscured by the fact that the assessment procedures used are often less than rigorous. They note that, in general, more rigorous evaluations show less generalization to have occurred. The present study differs from much of the research cited by Forehand and Atkeson (1977) in that the procedures used to assess the parents' generalization were quite rigorous, utilizing three different observation codes. The present study did indeed show that the parents were able to generalize their use of the procedures to the toy use activity and, to a lesser extent, the eating sessions. Because of Jay's seizure activity, a special ketogenic diet was prescribed by the family pediatrician. Everything Jay ate had to have a certain amount of special oil either cooked into the food or combined into it when it was served to Jay. Because of this, neither parent would allow Jay to even attempt to pick up his spoon independently and/or partially for fear of loss of the needed oil while Jay ate his food. Both parents had an interest in weaning Jay off this diet but, because of experimental control, it was not done during this study. It is very likely that complications of the diet were responsible, at least in part, for the fact that the parents did not generalize their use of partial guidance and decreasing of pre-empts to the eating sessions. Likewise, these factors resulted in lower levels of the child performing steps independently. They did, however,

allow Jay to pick up his fork once they had helped him secure the cooked food on it throughout the study. Comments by the father may account for the higher rate in his generalization of procedures than the mother. When asked to write down what he had learned from his wife, one of the points was that there should be a "carry over" of the same activity during training into everyday routines.

It appeared to the experimenter that there was more rapid learning and higher post-training performance by the father during dressing sessions as well as in his generalization to the activities of eating and toy use. At the outset of the study, the mother exhibited somewhat greater proficiency in teaching her son independent work skills than did the father. In particular, she required Jay to attempt tasks and guided him on some occasions, whereas the father often did things for Jay and rarely provided assistance. However, once the mother's use of skills trained clearly increased across the study, the father showed greater proficiency following training than did his wife. Also, more sessions were necessary for the mother to stabilize in her use of the procedures than were needed for the father.

The father's superior performance is encouraging, because it provides evidence that being trained by a spouse

rather than a professional does not necessarily result in lower levels of performance. A possible explanation for the father's rapid learning may be twofold: 1.) he always took great care when reading the written instructions, as well as continually questioning his wife on things that he did not fully understand. Often, re-reading the instructions before each session, he was always aware of the exact procedures to be used. 2.) while Jay was occasionally noncompliant for both parents, the father was better able to handle Jay's misbehavior. Also, the type of Jay's noncompliance differed depending on which parent was working with him at the time. Jay was often actively noncompliant with the mother (throwing toys, for example, when he should have been placing them in the correct position), whereas Jay was passively noncompliant with the father (ie., failing to move to complete the instruction). When this occurred, the father would patiently put Jay through the task or wait until he had calmed down, rather than forcing him to complete the task as the mother would usually do.

While no formal data were taken on the types of prompts used by either parent, both used physical prompts quite well, but differently. The mother was very good at obtaining Jay's attention. If he was not attending to the task, she would physically move his head to the required position and hold it there until Jay would do so on his own. The father often

used pointing in his prompts, showing Jay exactly where the toy should go, for example. He would also model the behavior expected of Jay so that he would know exactly what he should do.

The results of this study indicate that a mother, once trained in a parent training package, was not only able to modify specific components of her own behavior during dressing sessions with her son and then generalize this behavior to two activities of toy use and eating, but she was also able to successfully train the father in these same activities with no direct help from the experimenter. Correlated improvements in the son's behavior occurred as well. However, this study was not without its problems, one of which was parental availability, especially the father's. This study took $8\frac{1}{2}$ months to complete. This was not because the parents were unable to learn the procedures, but rather because of the unavailability of the father due to employment commitments. Data from this study provide information concerning the efficacy of one spouse training another, yet lack of availability by one spouse could possibly pose a problem for the experimenter, especially when frequent formal probe sessions are required. In his final comments of the experimenter, the father noted that his only criticism of the training program dealt with the delays entailed in experimental evaluations.

A second problem that both parents mentioned was the fact that they did not understand the difference between helping Jay by doing the step for him (pre-empting his behavior) and physically guiding Jay through the step. However, once the difference was made clear to them, they implemented the procedures accordingly.

Most studies that deal with increasing the rate of a child's independent self-help skills use positive reinforcement for this end (Ford, 1975; Minge and Ball, 1971; Morris, 1976). The present experimenter recognizes the value of this technique; however, because of the number of skills needed by the parents, it was not included as a component in the initial training package. It is quite possible that had positive reinforcement been incorporated into the treatment, higher increases in the effects of treatment might have occurred. However, once Jay's independent skills increased, so did the use of positive attention by the parents. The mother's rate of praise increased from 27% in baseline to 52% without any direct training. Not only did the father's positive attention increase from a very low rate (17% during baseline to 39% after initial training input) but it also began to be more specific to the task as the study continued. Both parents were aware of their increased use of praise, and in fact listed it as a part of the skills they thought they had learned in the training.

The father also became more aware of the importance of incorporating the learned procedures into everyday life. For example, he specifically requested that the mother train him at home rather than in the clinic, because he felt that Jay would usually dress in the home more than anywhere else, and if any problems occurred, they would occur in the home. Also, he requested that the mother be allowed to teach him in natural situations when Jay would normally be dressing or undressing, such as potty time and bed time. Additional positive changes in the mother also occurred during this study. She not only became more confident in dealing with Jay, but she also began to comment on the positive changes that were happening in Jay, such as his increased awareness in the things around him and in his increased ability to dress himself.

Jay's improvements were most evident in the dressing and toy use sessions, while all three activities showed a significant improvement in his attending behavior. At the beginning of the study, Jay was only able to slip off his shirt from his head, and pull his pants down to his ankles from his knees. During toy use activity, he was only able to place one ring on the stacking ring. However, by the end of the study, both of these were dramatically increased. During dressing, Jay learned to independently take off his pants from the waist to his feet then off his feet, as well

as pull them up to his hips once they were guided over his ankles. He was not only able to continue to pull off his shirt, but he also learned to pull it on over his head as well as being able to put it on and take it off once the parent assisted Jay in putting one of his arms through the sleeve. During toy use sessions, by the end of the study, Jay was able to do the following: 1.) consistently place at least 5 rings (sometimes 7) on a stacking ring; 2.) "mail" at least 2 round blocks into the appropriate holes and 3.) complete a three-piece puzzle of no interlocking pieces by placing a circle, triangle and a square in the appropriate place. At the completion of the study, it was also evident that Jay was attending much more to the toy use task which would partially account for the improvements. Little consistent change was obtained in Jay's behavior during the eating sessions, save for the fact that his spontaneous movement to pick up the utensil increased by at least 40%.

An exciting and interesting development occurred during the last training condition. When Jay became able to remove his pants independently, when lifting his leg to do so, he would appropriately say "step up" or "step out" as his mother had often done throughout the study. This vocalization generalized to the father's dressing sessions as well. Also, both parents commented on the fact that Jay was now able to completely remove his pajamas in the morning

and his clothes when it was time for his bath without the initial instruction to do so from the parents. For a few days during the study, he also began to undress in public or when company was visiting, but this behavior quickly vanished.

If time had permitted, this study would have investigated additional components for the generalization of fading out the parents' guidance during the activities of eating and toy use. While the father's use of partial guidance increased more so than the mother toward the end of the study, additional training would have been utilized in order to further decrease their use of pre-empts, particularly during eating sessions.

Further research might take the following directions:

- 1.) the possibility of initially training a father, and having him train his wife;
- 2.) examination of variables, other than parent availability, that might help to determine which parent would benefit more from professional training;
- 3.) investigation into additional components that would help facilitate generalization into all areas of interest; and
- 4.) follow-up sessions to ensure the long-lasting results of the training, particularly involving the one spouse trained by the other spouse. Also it is very possible that the family involved in this study was, in fact, atypical in their ability to implement the procedures, as well as their

high interest in the welfare of their son. This may be the reason for the mother's success in her ability to teach the procedures she had learned to her husband without the direct assistance of the experimenter. It is a question only future research can answer and the author feels it to be a good one.

In summary, this study demonstrated that a mother, after learning behavioral procedures for the use in a dressing activity, was able to generalize the many procedures from the training area of dressing to another self-help skill, eating and to a non-similar skill, toy use. It also demonstrated her ability to train her husband in the use of these same procedures without assistance from the experimenter, as well as showing generalization by the father as well. Correlated improvements by their son, Jay were also evident at the completion of this study.

REFERENCE NOTE

1. Elder, P. Introductory remarks on RIP. Paper presented at the 100th Annual Meeting of the American Association of Mental Deficiency, Chicago, Illinois, June 1976.

References

- Allen, K.E., & Harris, R.F. Eliminating a child's scratching by training the mother in reinforcement procedures. Behavior Research and Therapy, 1966, 4, 79-84.
- Becker, W.C., Madsen, C.H., Arnold, C.R., & Thomas, D.R. The contingent use of teacher attention and praise in reducing classroom behavior problems. In B. G. Guerney (Ed.) Psychotherapeutic agents new roles for para-professionals, parents and teachers. New York, N.Y.: Holt, Rinehart and Winston, Inc., 1969.
- Berkowitz, B. P., & Graziano, A.M. Training parents as behavior therapists: a review. Behavior Research and Therapy, 1972, 10, 297-317.
- Craighead, W.E., & Merciantonis, M. Mentally retarded residents as paraprofessionals: a review. American Journal of Nervous and Mental Disease, 1971, 152, 31-44.
- Cunningham, C. Parents as therapists and educators. In C.C. Kiernan (Ed.), Behavior modification with the severely retarded. Netherlands: Mouton and Co., 1975.
- Engeln, R., Knutson, J., Laughy, L., & Garlington, W. Behavior modification techniques applied to a family unit-a case study. Journal of Child Psychology and Psychiatry, 1968, 9, 245-252.
- Forehand, R., & Atkeson, B. Generalization of treatment effects with parents as therapists: A review of assessment and implementation procedures. Behavior Therapy, 1977, 8, 575-593.

- Ford, L.J. Teaching dressing skills to a severely retarded child. American Journal of Occupational Therapy, 1975, 29, 89-92.
- Gardner, J.M. Teaching behavior modification to nonprofessionals. Journal of Applied Behavior Analysis, 1972, 5, 517-526.
- Gladstone, B.W., & Sherman, J.A. Developing generalized behavior modification skills in high school students working with retarded children. Journal of Applied Behavior Analysis, 1975, 8, 169-180.
- Hall, R.V., Ayala, H., Copeland, R., Cossairt, A., Freeman, J., & Harris, J. Responsive teaching: An approach for training teachers in applied behavior analysis. In E.A. Ramp (Ed.), A new direction for education: Behavior analysis. Lawrence, Kansas: University of Kansas, 1971.
- Harris, F., Wolf, M.M., & Baer, D.M. Effects of adult social reinforcement on child behaviors. In B. G. Guerney (Ed.), Psychotherapeutic agents: New roles for nonprofessionals, parents and teachers. New York, New York: Holt, Rinehart and Winston, Inc., 1969.
- Hawkins, R.P., Peterson, R.F., Schweid, E., & Bijou, S. Behavior therapy in the home: amelioration of problem parent-child relations with the parent in the therapeutic role. Journal of Experimental Child Psychology, 1966, 4, 99-107.
- Horton, G.O. Generalization of teacher behavior as a function of subject matter specific discriminating training. Journal of Applied Behavior Analysis, 1975, 8, 311-319.

- Johnson, C.A., & Katz, R.C. Using parents as change agents for their children: A review. Journal of Child Psychology and Psychiatry. 1973, 14, 181-200.
- Jones, F.H., Fremouw, W., & Carples, S. Pyramid training of elementary school teachers to use a classroom management "skill package". Journal of Applied Behavior Analysis, 1977, 10, 239-253.
- Kelly, M.L., Embry, L.H., & Baer, D.M. Training parents in child management skills and family support skills for maintenance. Behavior Modification, 1978 (in press).
- Kreitzer, S.F. College students in a behavior therapy program with hospitalized emotionally disturbed children. In B. G. Guerney (Ed.), Psychotherapeutic agents: New roles for nonprofessionals, parents and teachers. New York, New York: Holt, Rinehart, and Winston, Inc., 1969.
- Lance, W.P., & Koch, A.C. Parents as teachers: Self help skills for young handicapped children. Mental Retardation, 1973, 11, 3-4.
- Long, J., & Madsen, C.H. Five year olds as behavioral engineers for younger students in a day-care center. In E. Ramp (Ed.), Behavior analysis: Areas of Research and application. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.
- Ludwig, A.M., Marz, A.J., & Hill, P.A. Chronic schizophrenics as behavioral engineers. Journal of Nervous and Mental Disease, 1971, 152, 31-44.

- McLaughlin, T.F., & Malaby, J. E. Elementary school children as behavioral engineers. In E. Ramp (Ed.), Behavior analysis: Areas of research and application. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.
- Minge, N., & Ball, T. Teaching of self-help skills to profoundly retarded patients. In A. M. Graziano (Ed.), Behavior therapy with children. Chicago, Illinois: Aldine-Atherton, 1971.
- Morris, R.J. Behavior modification with children: A systematic guide. Cambridge, Massachusetts: Winthrop Publishers, Inc., 1976.
- O'Dell, S. Training parents in behavior modification: A review. Psychological Bulletin, 1974, 81, 418-433.
- Panyan, M., Boozer, H., & Morris, N., Feedback to attendants as a reinforcer for applying operant techniques. Journal of Applied Behavior Analysis, 1970, 3, 1-4.
- Price-Bonham, S., Bibliography of literature related to roles of father. The Family Coordinator, 1976.
- Seigel, L., & Steinman, W.M. The modification of a peer-observer's classroom behavior as a function of his serving as a reinforcing agent. In E. Ramp (Ed.), Behavior analysis: Areas of research and application. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975
- Shah, S. Training and utilizing a mother as the therapist for her child. In B. G. Guerney (Ed.), Psychotherapeutic agents: New roles for nonprofessionals, parents and teachers. New York, New York: Holt, Rinehart, and Winston, Inc., 1969.

- Stokes, T.F., & Baer, D.M. An implicit technology of generalization. Journal of Applied Behavior Analysis, 1977, 10, 349-367.
- Wahler, R.G. Oppositional children: a quest for parental control. Journal of Applied Behavior Analysis, 1969, 2, 159-170.
- Wahler, R.G., Winkel, G.H., Peterson, R.F., & Morrison, D.C. Mothers as behavior therapists for their own children. Behavior Therapy and Research, 1965, 3, 113-124.
- Warren, A.R., & Baer, D.M. Correspondence between saying and doing: Teaching children to share and praise. Journal of Applied Behavior Analysis, 1976, 9, 335-354.
- Willis, J.W., Hobbs, T.R., Kirkpatrick, D.G., & Manley, K.W. Training counselors as researchers in the natural environment. In E. Ramp (Ed.), Behavior analysis: Areas of research and application. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.
- Zeilberger, J., Sampson, S.E., & Sloane, H.N. Modification of a child's problem behavior in the home with the mother as therapist. Journal of Applied Behavior Analysis, 1968, 1, 47-53.

FOOTNOTES

¹A full copy of the observation code is available upon request.

²A full copy of the observation code is available upon request.

³The following handouts were used:

Baker, B.L., Brightman, A.J., Heifetz, L.J., & Murphy, D.M., Steps to independence: Early Self-Help Skills. Champaign, Illinois: Research Press, 1976, p. 42.

Bluma, S., Shearer, M., Frohman, A., and Hilliard, J. Portage Guide to Early Education. Portage, Wisconsin: Portage Project, 1976:

Socialization Card #15: Seeks eye contact often when attended for 2-3 minutes;

Infant Stimulation Card #13: Looks at person attempting to gain his attention by talking or moving;

Infant Stimulation Card #27: Maintains eye contact for 3 seconds.

⁴Graphs for in vivo training sessions with mother and/or father are available upon request.

Table 1

Skill Steps For Each Activity

Dressing

- 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 hand
 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.

Eating

- Fork: 1.) Grasps utensil
 2.) Stabs food
 3.) Picks fork up
 4.) Gets fork to mouth
 5.) Puts utensil down
 6.) Releases utensil in plate or on table
- Spoon: 1.) Grasps utensil
 2.) Scoops food
 3.) Picks spoon up
 4.) Gets spoon to mouth
 5.) Puts utensil down
 6.) Releases utensil in bowl or on table

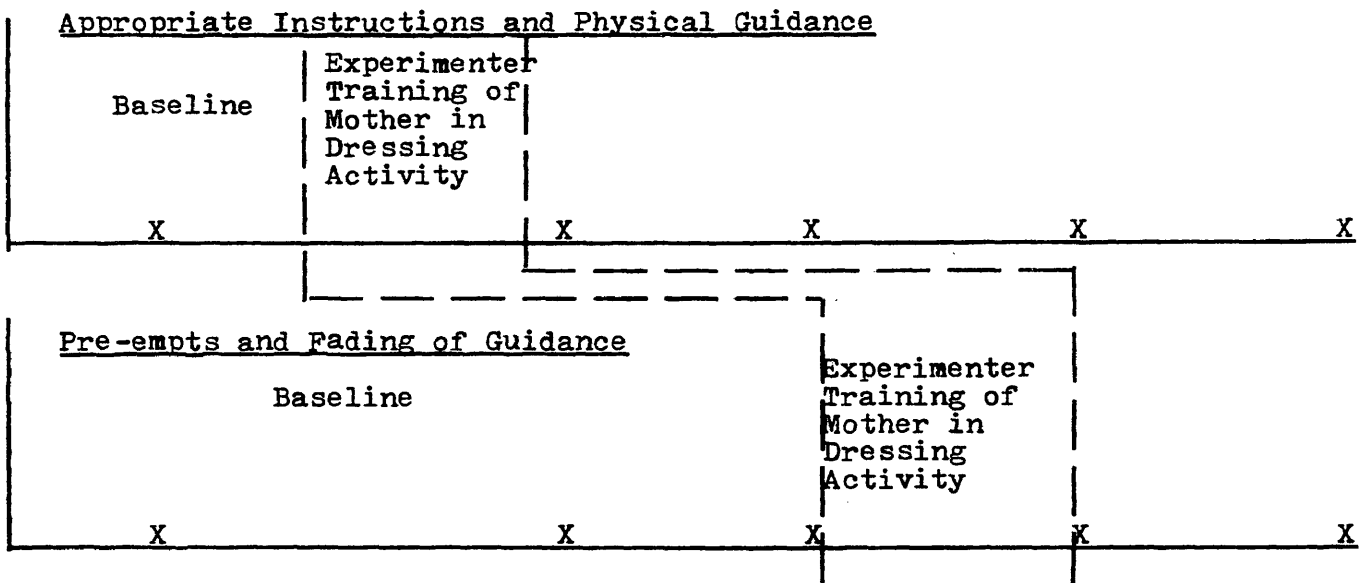
Toy Use

- 1.) Grasps item from parent
 2.) Grasps item from table
 3.) Moves item to position
 4.) Places item in position
 5.) Removes hand from item

Table 2

Sequence of Experimental Conditions
and Probe Sessions

MOTHER-CHILD SESSIONS



FATHER-CHILD SESSIONS

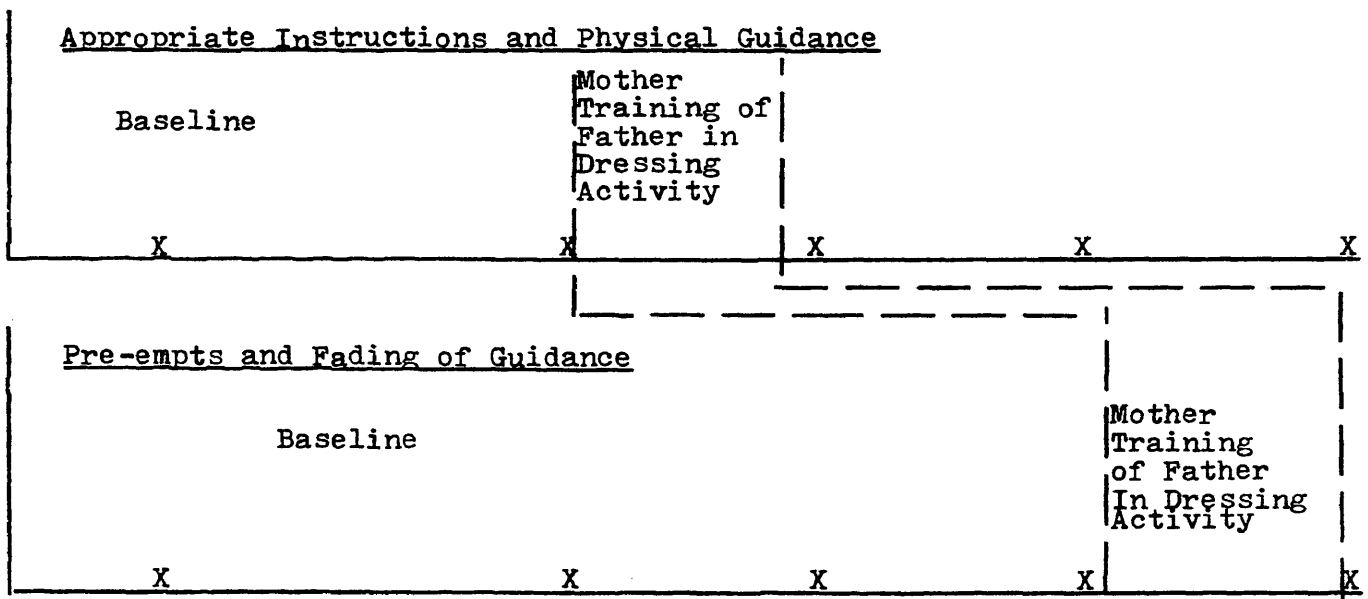


Table 3
Reliability Percentages on Parent
Behaviors in Probe Sessions

Behavior	Activity*	Range of Mean Reliability Within Conditions		Mean Reliability Across Conditions	
		<u>Mother</u>	<u>Father</u>	<u>Mother</u>	<u>Father</u>
Any Instructions	1	----	94- 95	100	95
	2	91-100	88-100	95	96
	3	98-100	94-100	98	96
Appropriate Instructions	1	83- 93	92-100	89	93
	2	83-100	80-100	91	96
	3	84-100	92-100	93	94
Repeat of Instruction	1	76-100	83-100	86	91
	2	79- 87	----	83	100
	3	81- 91	70- 88	85	79
Complete Guidance	1	80- 94	75- 90	92	78
	2	80- 92	93- 97	91	95
	3	85- 95	80- 93	88	86
Partial Guidance	1	----	42- 60	100	46
	2	50- 83	50-100	75	80
	3	80-100	50-100	89	68
Any Guidance	1	96-100	0-100	97	97
	2	92- 97	91-100	95	93
	3	91- 96	84- 95	93	87
No Pre-empts by Parent	1	92-100	86-100	95	91
	2	81- 84	85- 87	83	86
	3	83-100	90-100	90	90
Positive Attention	1	78-100	88-100	89	92
	2	75- 92	94-100	85	97
	3	91-100	81-100	95	89
Neutral Attention	1	94-100	91-100	95	95
	2	83- 85	97-100	84	99
	3	88-100	92-100	94	94
Any Attention	1	----	----	100	100
	2	96-100	98-100	97	99
	3	----	----	100	100

* 1= dressing; 2= eating; 3= toy use

Table 4
Reliability Percentages on Child
Behaviors in Probe Sessions

Behavior	Activity*	Range of Mean Reliability Within Conditions		Mean Reliability Across Conditions	
		Mother	Father	Mother	Father
Child Does Step Independently	1	88-100	90- 91	95	91
	2	87- 93	78- 98	91	94
	3	83- 97	69- 86	85	82
Spontaneous Movement	1	83-100	67-100	95	71
	2	94-100	79- 96	96	91
	3	65-100	88-100	68	95
Attending(every 10 seconds)	1	85- 95	85- 95	90	92
	2	82- 93	86- 95	92	92
	3	91- 97	84- 97	93	96
Attending(five consecutive seconds)	1	95-100	96-100	98	97
	2	94-100	89-100	95	95
	3	86- 95	92-100	92	95
Noncompliance	1	81-100	-----	83	100
	2	-----	-----	83	---
	3	96-100	75-100	97	83
Any Compliance	1	93-100	-----	97	100
	2	99-100	-----	99	100
	3	98-100	98-100	99	97

* 1 = dressing sessions; 2 = eating sessions; 3 = toy use sessions

Table 5
 Experimenter and Parent Perceptions
 of Skills Taught in Initial Training Condition:
 Training on Appropriate Instructions and Physical Guidance

What Experimenter Thought She Taught the Mother	What Mother Thought She Learned and Then Taught the Father	What Father Thought He Learned From the Mother
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.		Avoid distraction.
	Praise after each step.	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.	Avoid frustration- if Jay is having trouble, help him.
	Be consistent-set up routines; time and place and follow them.	
	Break tasks into small steps, teaching step by step.	
		Carry over same activity into everyday routine, not just in training situation.

Table 6

Experimenter and Parent Perceptions
of Skills Taught in Second Training Condition:
Training on Pre-empts and Fading of Guidance

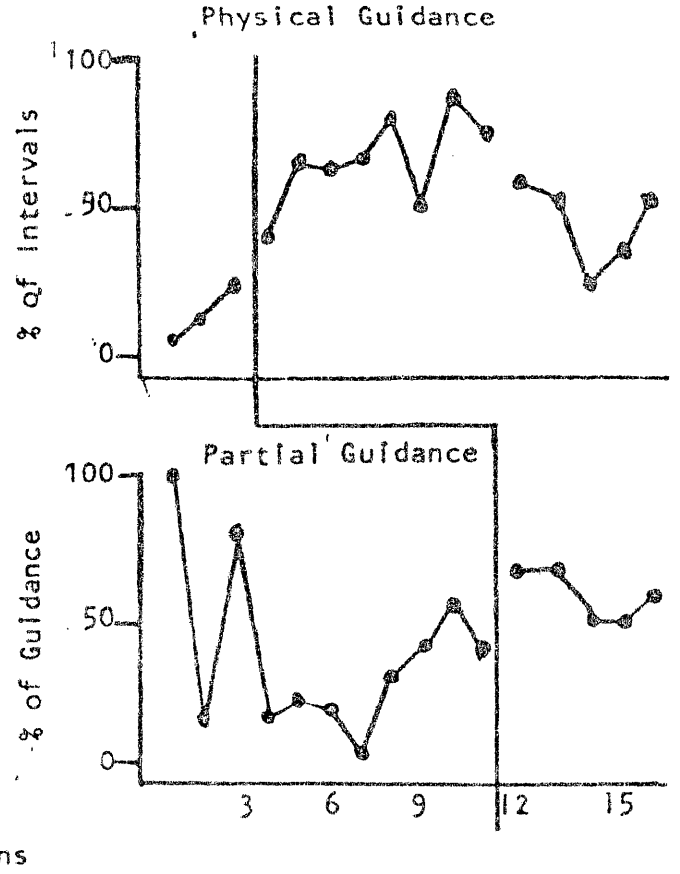
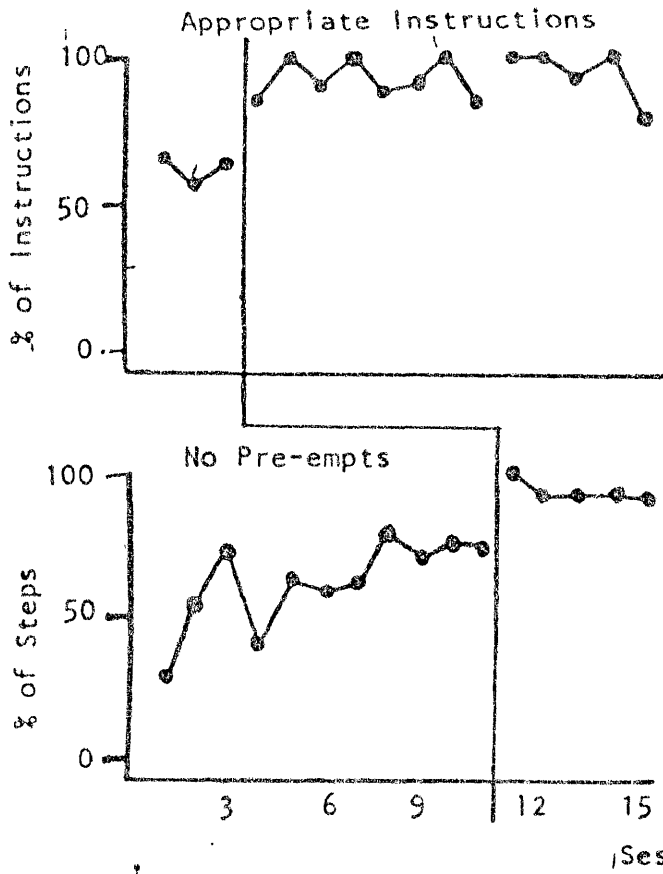
What Experimenter Thought She Taught the Mother	What Mother Thought She Learned and Then Taught the Father	What Father Thought He Learned From the Mother
Complete guidance should be used only when partial guidance is not enough for Jay to complete the task. Continue to fade guidance until Jay is doing 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.		

Figure Caption

Figure 1. Percentages of mother behaviors during probe sessions of dressing, eating and toy use activities. Breaks between lines indicate change of treatment conditions.

MOTHER BEHAVIORS

DRESSING



EATING (●—●) AND TOY USE (○—○)

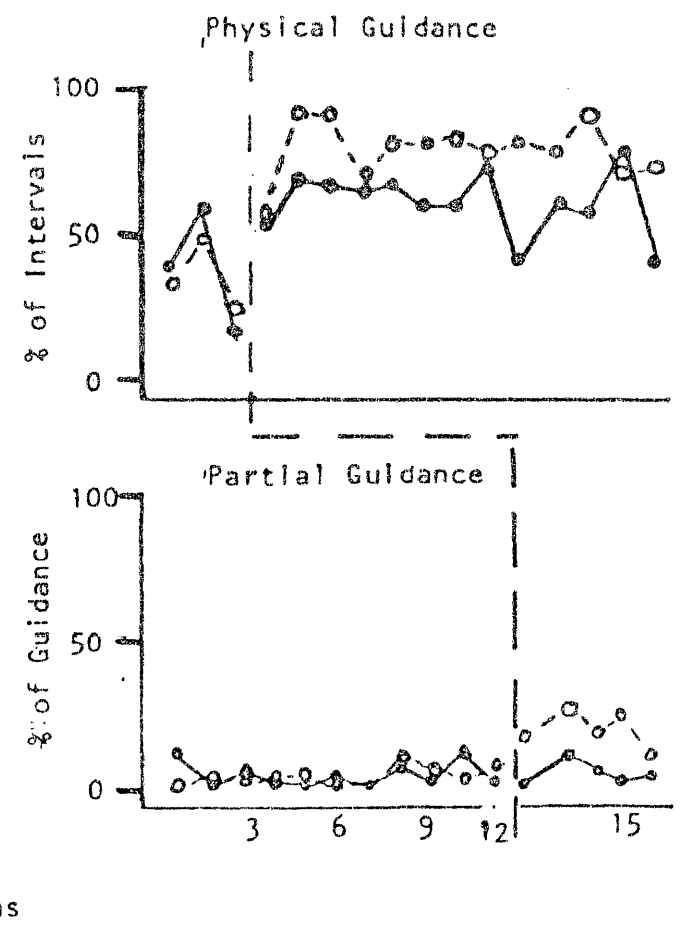
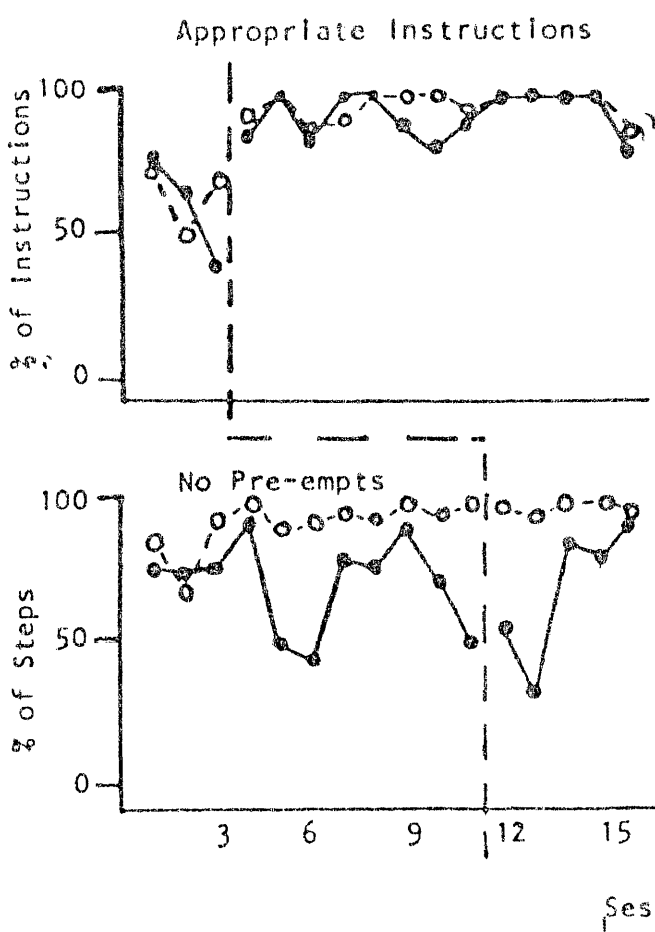
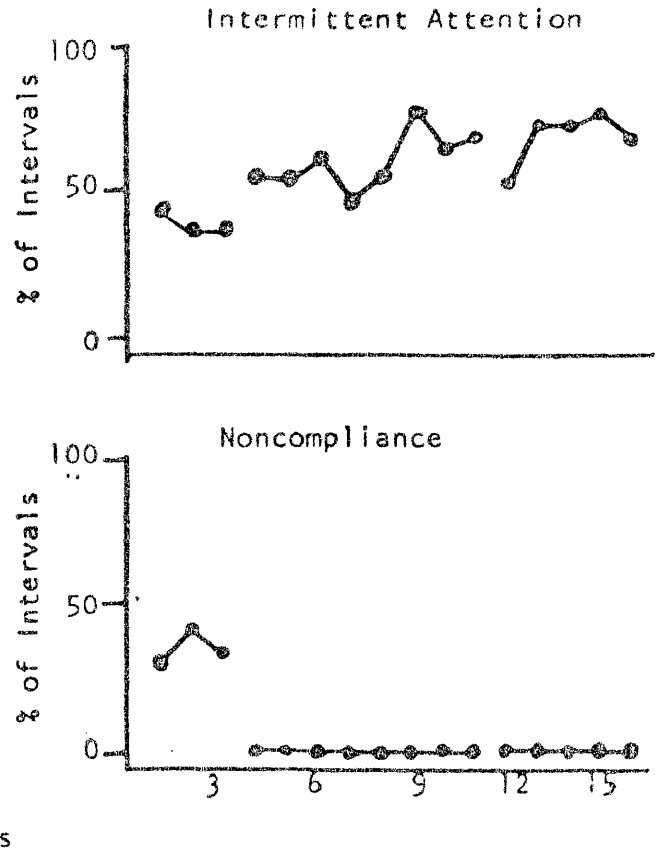
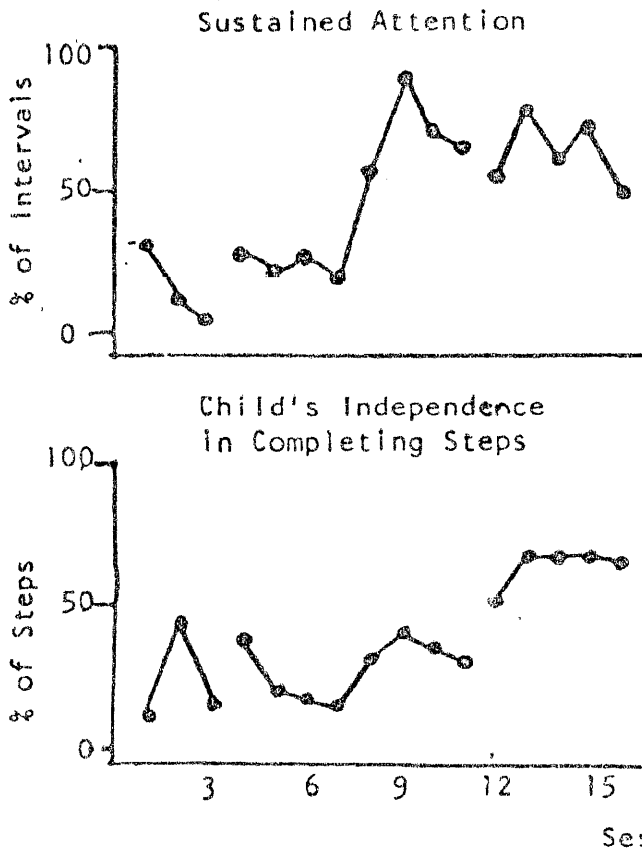


Figure Caption

Figure 2. Percentages of child behaviors for probe sessions of dressing, eating and toy use activities with the mother. Breaks between lines indicate change of treatment conditions.

CHILD BEHAVIORS WITH MOTHER

DRESSING



EATING (●—●) AND TOY USE (○—○)

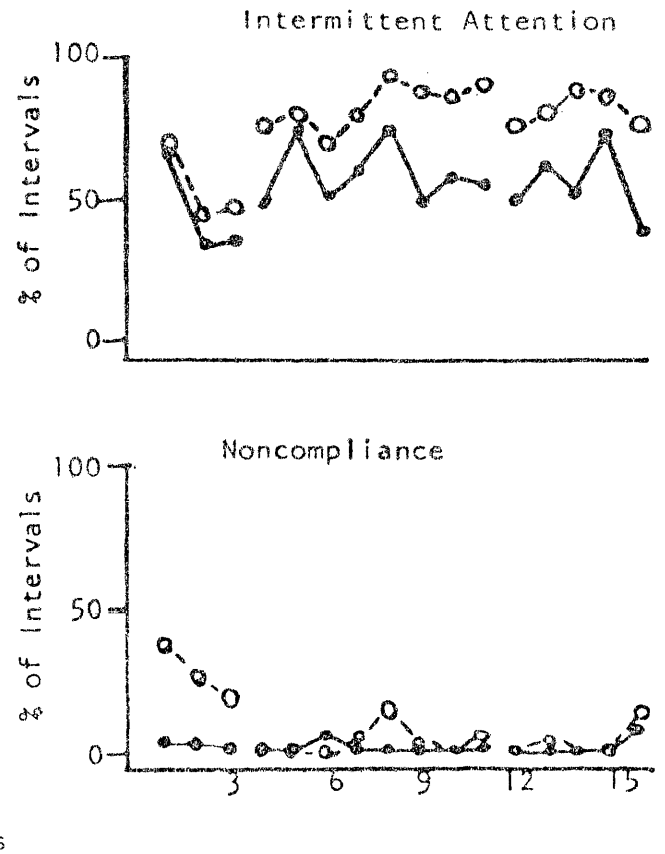
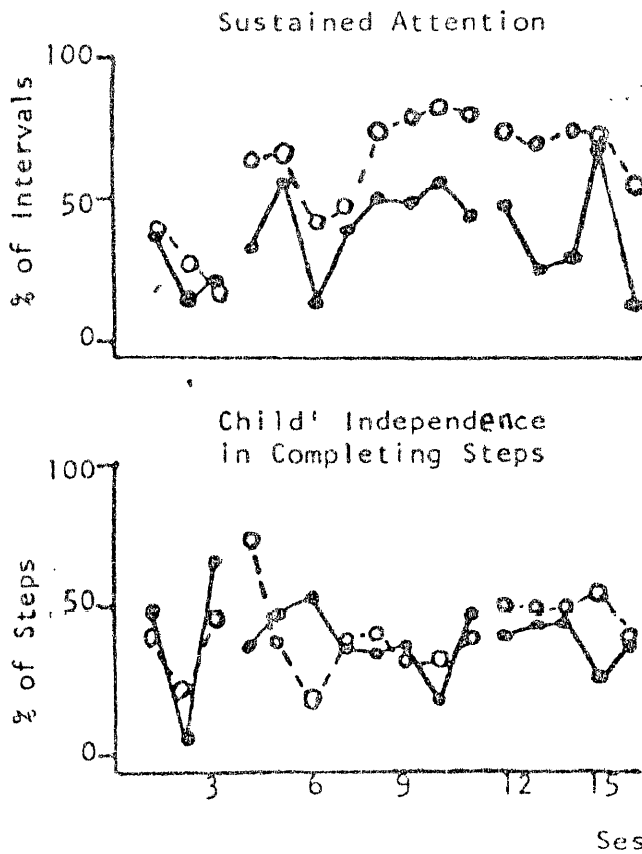
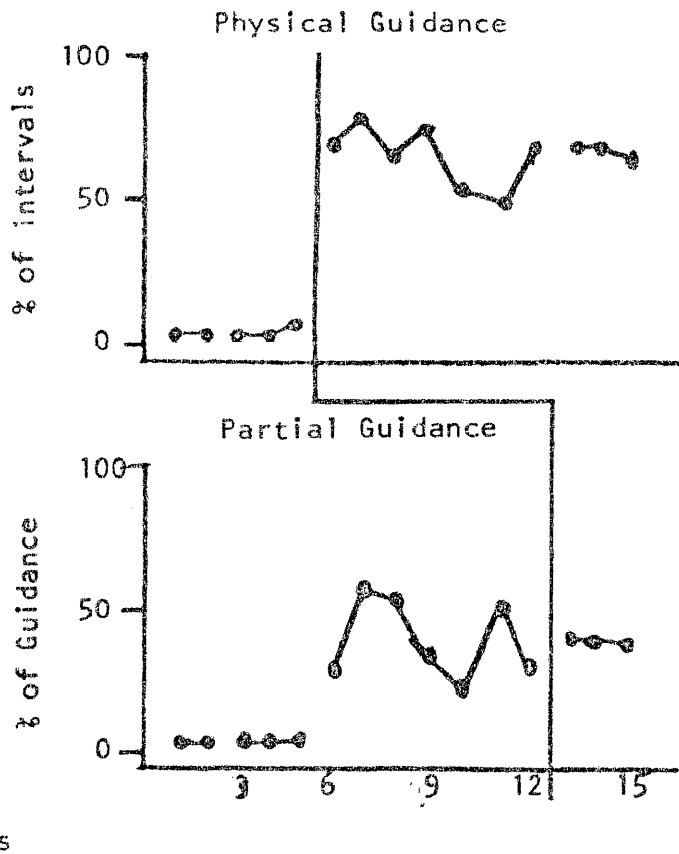
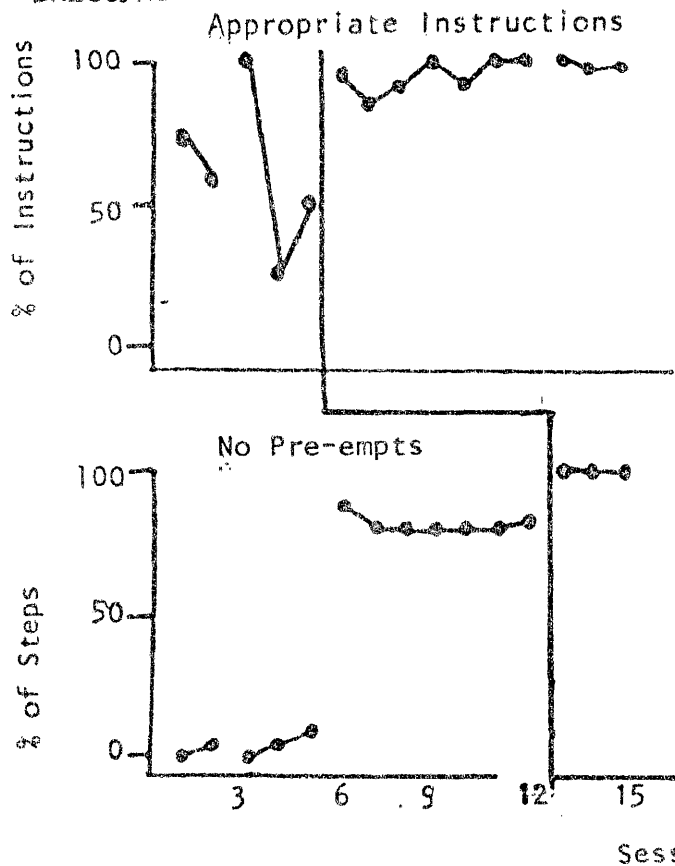


Figure Caption

Figure 3. Percentages of father behaviors during probe sessions of dressing, eating and toy use activities. Breaks between lines indicate change of treatment conditions.

FATHER BEHAVIORS

DRESSING



EATING (●—●) AND TOY USE (○—○)

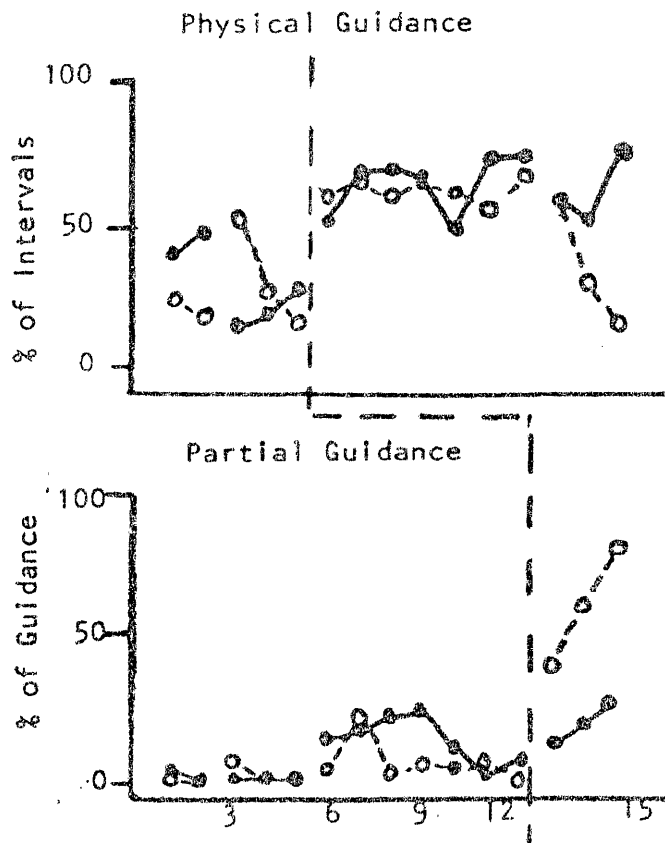
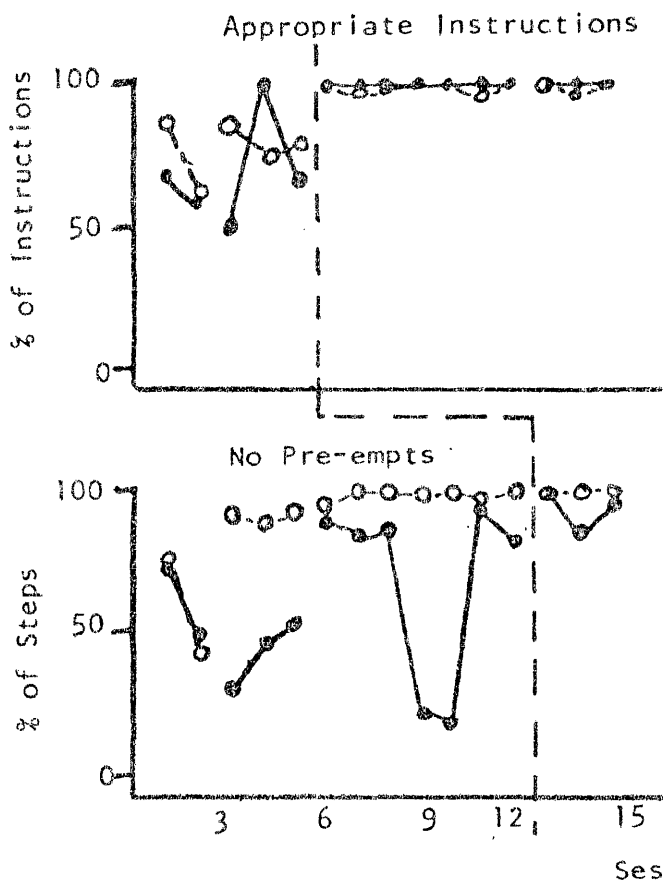
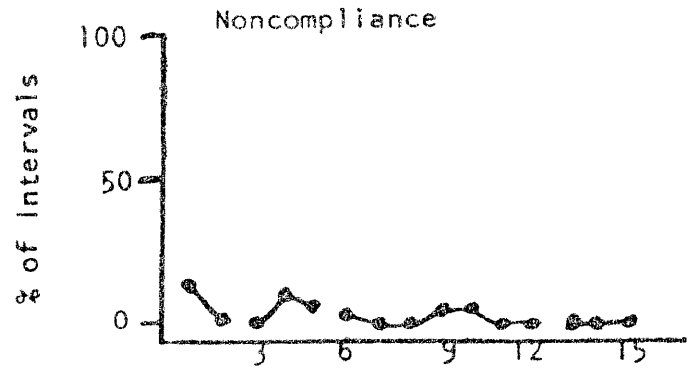
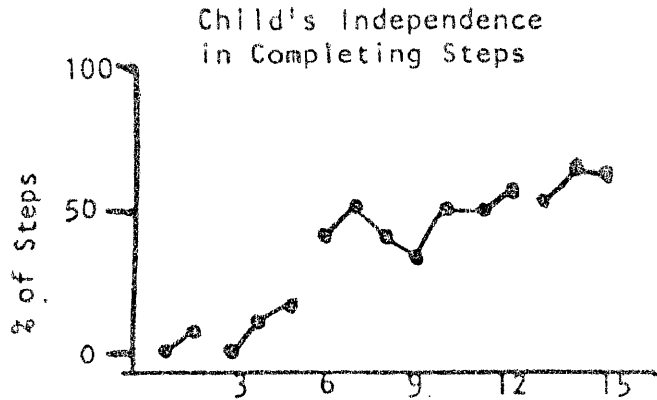
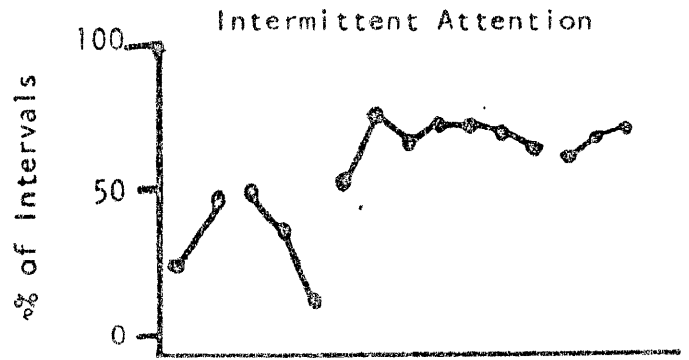
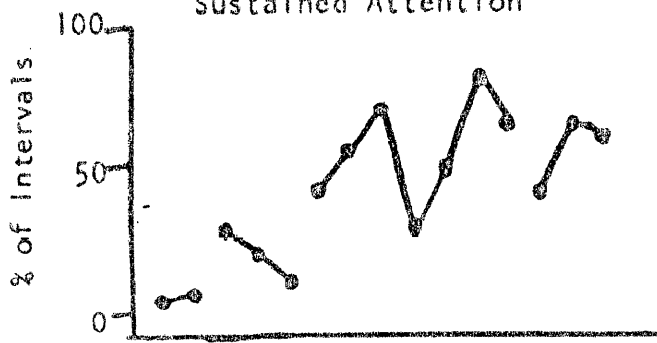


Figure Caption

Figure 4. Percentages of child behaviors during probe sessions of dressing, eating and toy use activities with the father. Breaks between lines indicate change of treatment conditions.

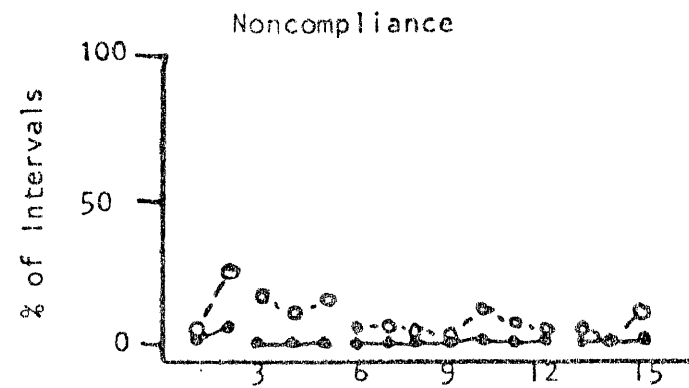
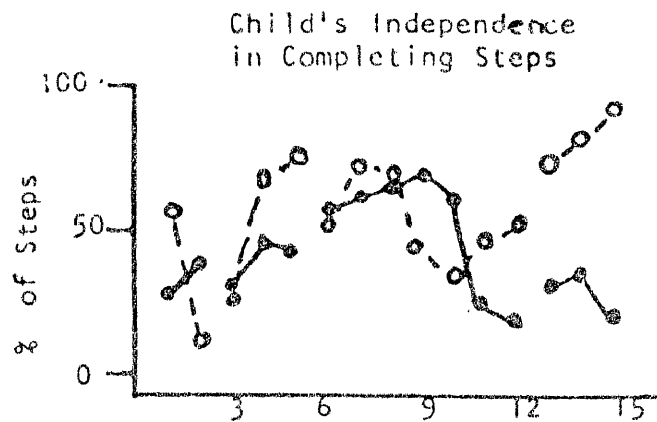
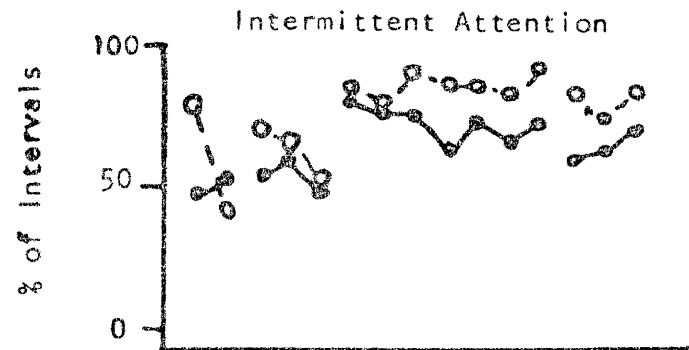
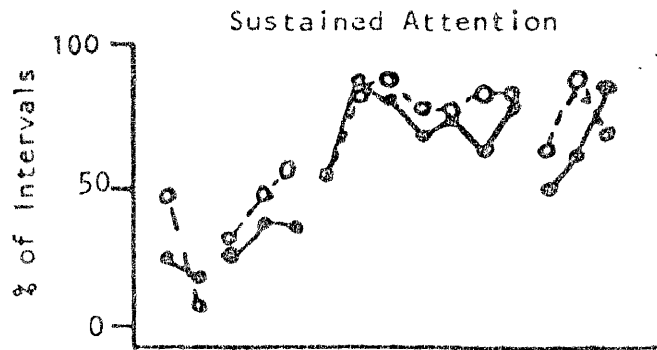
CHILD BEHAVIORS WITH FATHER

DRESSING



Sessions

EATING (●—●) AND TOY USE (○—○)



Sessions