The study examined effects of a combined teacher-parent behavior management program focusing on inappropriate behaviors in the school and homes of five preschool children with developmental and/or language delays, behavior disorders, and/or multiple handicaps. A special education teacher/trainer collaborated with parents to select target behaviors for the children. Training in selected behavior management strategies was conducted by the teacher in home consultations. Behavior management programs were introduced simultaneously in homes and classrooms using an AB design with across subject replication. The results suggest that parent/teacher collaboration in implementing behavior change programs can substantially decrease occurrence of problem behavior in both home and school settings. (PB)
Effects of a Collaborative Teacher/Parent Intervention on the Behavior Problems in the Classroom and the Home of Preschool Handicapped Children 1, 2

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Running Head: PARENT TRAINING


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Abstract
The effect of a combined teacher-parent behavior management program on inappropriate behaviors in the school and home of five preschool handicapped children was evaluated. A special education teacher/trainer collaborated with the parents to select the target behavior for the children. Training in selected behavior management strategies was provided by the teacher via consultation in the home. The behavior management programs were introduced simultaneously in the home and in the classroom using an AB design. The results suggest that collaborating with parents in instituting a behavior change program can decrease substantially the occurrence of the problem behavior in both in the home and in the school settings.
Effects of a Collaborative Teacher/Parent Intervention on the Behavior Problems in the Classroom and the Home of Preschool Handicapped Children

In the last ten years, there has been growing interest in parent participation in modifying children's behavior problems in the classroom and in the home. Clements and Alexander (1975) asserted that attitudes regarding parent involvement in the education and socialization of their children run from skepticism to active involvement by parents in educational and therapeutic services. The rather equivocal acceptance of teacher-parent collaboration poses a major problem to researchers and practitioners alike. Treatment that addresses problem behavior in one setting but ignores the equally serious occurrence of the problem in other settings, offers little chance of a successful and enduring outcome.

The need to provide comprehensive treatment for children engaging in disruptive or inappropriate behavior has received much attention in the literature (e.g., Briener & Beck, 1984; Forehand & Atkeson, 1977; Moore & Bailey, 1973; Patterson, 1974). Indeed, Johnson and Katz (1973) concluded that changes in behavior will not necessarily generalize unless support is provided across settings in order to maintain them. Further, Gable, Hendrickson, Algozzine, and Scully (in press) asserted that knowledge of the treatment of children's behavior problems is incomplete without taking into account the relationship
between the child and significant persons indigenous to the natural environment. There is mounting evidence that it may be essential to engage both parents and teachers in child treatment in order to promote enduring changes in behavior.

Involving parents in treatment programs is desirable in that parents are present in the natural environment and over a long period of time during their child's life (Schulze, Rule, & Innocenti, 1989). Functioning in the role of consultant, various trained professionals sometimes assist parents in applying child management skills to specific problem behaviors they want to change in the home (Clements & Alexander, 1975). Providing this training enables parents to help their child to transfer new skills to other settings and to increase the likelihood of maintenance and generalization of behavioral gains. Contemporary training practices are predicated on the fact that skills acquired in training are applied by parents in the home in the absence of professional support and ideally after formal intervention is concluded (Nay, 1979).

Various authorities have posed that children evidencing behavior problems are at risk for experiencing a range of negative consequences, e.g., social isolation, neglect and physical abuse (Glaser & Bentovim, 1979; Turnbull & Turnbull, 1985). Use of parent training and intervention has been beneficial in mitigating against the occurrence of these adverse events (Turnbull & Turnbull, 1985; Van Hasselt, Sisson, & Aach,
Parent Training

1987), facilitating skill acquisition and generalization (Cordisco & Strain, 1986; Forehand et al., 1979; Koegel, Glahn, & Nieminen, 1978), reducing maladaptive behavior (Forehand et al., 1979; Johnson, Whitman, & Barloon-Noble, 1978; Moore & Bailey, 1973; Rinn, Bernon, & Wise, 1975), and in producing changes in parent perceptions of and attitudes toward their children (Forehand & King, 1977; Forehand et al., 1979; Turnbull & Turnbull, 1985). In sum, accumulated evidence supports the opinion that positive outcomes can be expected with regular and exceptional children as a result of parent involvement in behavior change programs.

Not only have parent-child interactions been improved in the home and clinic settings (Strain, Young, & Horowitz, 1981), but also it has been shown that these behavior changes may persist in the absence of treatment and actually generalize to other stimulus conditions (Wahler, 1975). For example, Sanders and Glynn (1981) compared the effectiveness of three phases of parent training for parents whose preschool children presented persistent behavior problems. Parents were trained in behavior management techniques in the first phase, self-management techniques in the second, while the third phase included maintenance training in which no further cues, corrections, or feedback were given the parents by the trainer. The findings showed that the parent training program was effective in reducing undesirable behaviors from 31.9% of baseline intervals.
to 3.1% in the final phase. Similar results were obtained by Johnson et al. (1978) in introducing a set of reinforcement procedures upon the "autistic-like" behavior of a four-year-old girl. The study was conducted entirely in the home, with the mother and father serving as change agents. Training was conducted in a semi-structured play setting using written and verbal instructions to teach the parents to use positive attention and time-out. Each parent independently employed trained procedures to manage the child's compliance versus inappropriate vocalizations, and noncompliance behaviors. During baseline, inappropriate vocalization with the mother ranged from 20-33% and averaged 29%; whereas, vocalizations with the father were more variable and ranged from 22-66% and averaged 44%. Following the introduction of intervention, the behavior was reduced with both parents to means of 6% and 10%, respectively. During reversal conditions, an increase in the behavior was observed at an average of 30% for the mother and 26% for the father. Reinstatement of treatment resulted in marked decreases in inappropriate vocalization (i.e., 8% with the mother and 7% with the father). During baseline, compliance with mother and father was 60% and 62%, respectively. Consonant with intervention, compliance increased markedly and averaged 86% with mother and 90% with father. A return to baseline conditions produced a sharp decline in compliance with each parent, while reinstatement of intervention again increased child compliance.
Cordisco and Strain (1986) evaluated a multicomponent parent training program which stressed the acquisition of general training strategies on the ability of parents to generalize learned skills from an academic task in a school setting to a structured play setting in the home. Training focused on didactic teaching of a single parent target behavior, trainer modeling of the correct behavior procedure, videotaped observation of the parent working with the child, and a video-feedback session to discuss appropriate and inappropriate use of behavioral strategies. Findings demonstrated that all parents demonstrated changes in the correct use of behavioral strategies in the training (school) setting. All the children improved their compliance between 20-50% to parents' demands during school training. Also, an increase of 20-40% in appropriate behaviors was observed. In the home, child compliance and appropriate behaviors increased dramatically to 100%. Further, the parents demonstrated retention of the previously learned skills over a 12-month follow-up period.

A comparable study by Sanders and Dadds (1982) examined the effects of two parent training programs on the generalization of parent and child behaviors to extra training sessions. Five parents of preschool children exhibiting behavior problems were sequentially exposed to a training program that included teaching the parents how to use descriptive praise and five different management strategies. A multiple baseline across subjects design was employed, with observational data
collected in two different settings, a training setting, and a range of generalization settings in the home and community. Results showed that parents generalized acquired skills to nontraining settings, but only one of the five parents was effective in decreasing levels of deviant child behavior. The introduction of planned activities and behavior-specific intervention resulted in further improvements in child behavior in both training and generalization settings for three more parents and maintained decreased levels of deviant behavior for a fourth parent.

There is little or no empirical evidence that parents of children who evidence severe behavior problems are able to reduce the occurrence of undesirable behavior without a parent training program. Still, Schulze et al. (1989) argued that although it is desirable for parents to teach their children appropriate behaviors, they may not always be willing or able to commit the time required to learn appropriate strategies and to apply them out over a long period of time. In support of this contention, in a survey of 31 parents of children with disabilities enrolled in a preschool program, Winton and Turnbull (1981) found that only 13% said they would choose to be involved in parent training programs. They concluded that parent training is a process that not only needs to be effective and meet parental limitations but also it must be actively promoted with often resistive parents. Notwithstanding the burgeoning body of
research that substantiates the worth of parent training, actual parent contact by special education teachers is extremely limited; and, the frequency of contacts is primarily a function of administrative mandates for progress reports to the parents (Clements & Alexander, 1975). Another critical aspect of parent-teacher involvement that is too often missing is preparation of teachers to successfully train parents in behavior management techniques. Various authors have argued that teacher training programs should include so-called "indirect skills" that pertain to the collaborative process (Gable, Hendrickson, Warren, Evans, & Evans, 1988; Friend, 1985; Idol-Maestas & Ritter, 1985). Unfortunately, scant information is available on whether teacher-parent collaboration on behavior problems that occur in the classroom and the home and consulting with parents on the use of appropriate behavior strategies will produce enduring changes in child behavior within and across settings.

Therefore, the present study was designed to gain additional information on parent training by public school personnel. A program was introduced in which parents of preschool children displaying behavior problems in the classroom and in the home were instructed in the use of behavior management strategies. The aim was to eliminate inappropriate behavior within both home and school settings. It was assumed that documenting collaborative processes that served to positively influence not only the quality of the teacher-parent interactions but also the
behavior of selected children might contribute to what is known about teacher preparation needs.

Method

Subject and Settings

Three mother-child pairs, one father-child pair, and one babysitter-child pair served as subjects for this study. All of the children were enrolled in a self-contained special class for the preschool handicapped. In Family 1, the child was a two-year, six-month old developmentally delayed male. The mother was 42 years old, separated, with 10 years of education, and employed part-time. Also living in the household were two siblings, ten-year-old male and a 17-year-old male. Problem behavior demonstrated by the child across settings and identified as the treatment target was finger-chewing.

In Family 2, the child was a three-year, two-month old macrocephalic, developmentally delayed male. The father was 25 years old, with 12 years of education, and employed full-time during the day. Problem behavior demonstrated by the child across settings and identified as the treatment target was cup throwing during meals.

In Family 3, the child was a four-year, 11-month old severely language delayed and behavior disordered male. The mother was 26 years old, with 12 years of education, and employed part-time. Problem behavior demonstrated by the child across setting and identified as the treatment target was licking his
hand while holding it in front of someone's face.

In Family 4, the child was a four-year, 11-month old multiple handicapped male. The babysitter was 55 years old with 14 years of education. Living in the household was the mother who was 29 years old, with 16 years of education, and employed full-time, and the father who was 35 years old, with 16 years of education, and employed full-time. Problem behavior demonstrated by the child across settings and identified as the treatment target was screaming.

In Family 5, the child was a three-year, 8-month old severely language delayed female. The mother was 30 years old, with 16 years of education, and employed part-time. Also living in the household was the father who was 34 years old, with 16 years of education, and employed full-time, and one sibling, a six-year-old female. Problem behavior demonstrated by the child across settings and identified as the treatment target was spitting on people.

The classroom setting consisted of a self-contained program serving 8 preschool handicapped children, with one teacher assistant, and one preschool teacher. The classroom was approximately 27 feet long and 30 feet wide. The furnishings consisted of two teacher desks, two adult chairs, an 8 x 5 foot rug, one preschool-sized kidney table, one preschool-sized rectangular table, 15 preschool chairs, a play kitchen area, and a therapy corner with a mat and equipment. The classroom was
located in a regular elementary school building in the kindergarten wing.

Data Collection Procedures

Frequency data were collected on all five subjects. For students 1, 3, 4, and 5, data was collected during the three hour interval in the classroom. Home data was collected on an average of three times per week while classroom data were collected daily. Data for student 2 was collected during a 30 minute snack-time in the classroom and during a 30 minute dinner-time in the home. Targeted behaviors were recorded by a trained observer by placing a slash on a data collection form each time the targeted behavior occurred.

Parent Training Procedures

Each parent involved in the intervention process in the home along with the babysitter participated in two one-hour training sessions conducted by the preschool teacher on basic principles of behavior management. These training sessions were conducted prior to the introduction of intervention into the home. The sessions focused on behavior management strategies referenced to target behaviors. First, parents were asked to focus on behaviors that had been identified as problematic in both the home and the school setting. Each parent was instructed on how to identify, define and measure the behavior, how and when to praise their child, and how to structure the home environment to decrease inappropriate behavior. The training format included:
discussion, role-play exercises coupled with corrective feedback, verbal stimulation activities, and trainer modeling of the correct behavior strategy. Supplementary reading material on behavior management principles and how to apply them was provided by the teacher trainer.

Procedures to decrease targeted inappropriate child behaviors were individually selected for each parent-child dyad and included: extinction, interruption and redirection, overcorrection, and response-cost. Appropriate use of positive reinforcement of replacement behavior was included in the plan for each child.

Experimental Design

For both home and school setting, each child was first observed with no attempt at intervention to establish a baseline measure of behavior. Using an AB design (Hersen & Barlow, 1976) with across subject replication, each parent was initially introduced to an intervention procedure that was employed simultaneously in the classroom and in the home. Baseline data was collected for four sessions in the home and five sessions in the classroom. Next, the intervention was introduced and data collected to determine if the behavior program would be successful both in the classroom and in the home.

Interrater Reliability

Interrater reliability was established at 85% prior to initiating data collection and then calculated during
approximately 20% of the sessions during the intervention phase in the home. During reliability sessions, two trained observers simultaneously and independently observed and recorded data on the target behavior(s).

Results

Interrater Reliability

Interrater reliability was determined by dividing the smaller number of target behaviors by the larger number for each observation and multiplying by 100. For Student 1, reliability figures ranged from 83.33% to 100% (with a mean of 94.45%). For Student 2, reliability figures ranged from 94.44% to 100% (with a mean of 99.31%). For Student 3, reliability figures ranged from 88.89 to 100% (with a mean of 96.62%) For Student 5, reliability figures ranged from 77.78% to 100% (with a mean of 94.78%).

Insert Figures 1 and 2 About Here

Child Target Behavior

Figure 1 shows the frequency of inappropriate behavior observed in the preschool classroom and in the home for Student 1. During baseline conditions, the target behavior occurred at an average rate of 7.06 times per hour in the classroom and 8.41 times per hour in the home. The introduction of intervention resulted in a sharp decrease in the occurrence of the target behavior (see Figure 1).
Figure 2 shows the frequency of inappropriate behavior observed in the preschool classroom and in the home for Student 2. An immediate increase in undesirable behavior was observed in both settings following the introduction of intervention. Desired changes of the target behavior were not observed to occur until session 40 in the classroom and session 16 in the home. Then a gradual decrease in the undesirable behavior was observed in both settings. During baseline conditions, the target behavior occurred at an average rate of 11.2 times per half hour in the home. Concomitant to introduction of the intervention, a gradual decrease in target behavior led to its virtual elimination.

Figure 3 shows the frequency of inappropriate behavior observed in the preschool classroom and in the home for Student 3. An immediate increase in undesirable behavior was observed in both settings following the onset of treatment. Desired rates of the target behavior were not observed to occur until session 29 in the classroom and session 11 in the home. Then a gradual decrease in undesirable behavior was observed in both settings. During baseline conditions, the target behavior occurred at an average rate of 6.66 times per hour in the classroom and 7.33 times per hour in the home. Intervention resulted in a decrease
in the occurrence of the target behavior that culminated in its near extinction.

Figure 4 shows the frequency of inappropriate behavior observed in the preschool classroom and in the home for Student 4. Desired rates of the target behavior were not observed to occur until session 14 in the classroom and session 7 in the home following the onset of treatment. Then a gradual decrease in the undesirable behavior was observed in both settings. During baseline conditions, the target behavior occurred at an average rate of 8.06 times per hour in the classroom and 9.5 times per hour in the home. The introduction of intervention resulted in a sharp decrease in the occurrence of the target behavior.

Insert Figure 5 About Here

Figure 5 shows the frequency of inappropriate behavior observed in the preschool classroom and in the home for Student 5. A gradual decrease in undesirable behavior was observed in both settings. During baseline conditions, the target behavior was occurring at an average rate of 4.13 times per hour in the classroom and 4.25 times per hour in the home. The introduction of intervention resulted in a decline in the occurrence of the target behavior to its near elimination.

Follow-Up Data

Conducting the study in multiple home settings and at the
end of the school year limited the collection of follow-up data to two students over a 12-week period after the conclusion of the intervention program. The data on Student 2 indicated that the average rate of occurrence of the target behavior was .11 times per half hour in the classroom and .21 times per half in the home (see Figure 6). For Student 5, follow-up data were collected over a 4-week period after the intervention program was concluded (see Figure 7). The data indicated that the average rate of occurrence of the target behavior was 0 times per hour in the classroom and .10 times per hour in the home.

Insert Figures 6 and 7 About Here

Discussion

The major result of this study was the successful treatment stemming from teacher-parent collaboration on the problem behaviors of five preschool handicapped children. Teacher consultation on the correct use of extinction, interruption and redirection, overcorrection, and response-cost greatly decreased the rate of problem behaviors in both the classroom and home settings. These findings add further credence to the opinion that teachers collaborating with parents on identifying problem behavior in the home and in the classroom, and then working with parents on the correct use of behavior strategies can decrease substantially bouts of problem behavior within and across
The decrease in inappropriate home and classroom behavior subsequent to parent training replicates the treatment effects obtained by Hanley, Perelman and Homan (1979), Sanders and Glynn (1981), and Van Hasselt et al. (1987) who used similar training tactics. However, the present study represents a significant expansion of these earlier efforts. First, a special classroom teacher collaborated with the parents in order to obtain a common target behavior in the classroom and in the home. Second, the teacher drew upon emerging collaboration literature process skills (e.g., behavioral interviewing, paraphrasing, role specification) to teach parents the use of behavior management techniques. Finally, the cooperatively developed intervention(s) was introduced simultaneously in both settings in order to establish a more consistent approach to child management.

The positive effects of a collaborative, teacher and parent-mediated intervention program may have been related to several factors. Specifically, the parents sought assistance with their child's problem behavior, a strong indication of their willingness to be actively involved in the intervention process. Another factor was that the special education teacher conducted a home visit two times per month as a requirement of the special preschool program. These visitations provided the teacher ample opportunity to become familiar with the family and afforded the occasion to observe parent-child interactions in the home.
In the present study, each child displayed problem behaviors common to both the preschool classroom and the home setting. The magnitude of the behavior problems was not as significant as the fact that the behavior was socially unacceptable. Intervention introduced simultaneously in both settings focused on tactics specifically tailored to each child's presenting problem(s) previously identified by the parent and observed in both settings. An increase in targeted behaviors after the introduction of intervention for Students 2, 3, and 4, may be explained by the fact that extinction and overcorrection typically evoke a "paradoxical affect" -- an increase in the undesired behavior until after a sufficient period of intervention when the behavior will decline (Walker & Shea, 1988). Even so, parents were able to sustain application of newly acquired behavior management techniques to targeted child problem behaviors until success was achieved in the home.

Findings of the present study suggest that a teacher-parent partnership can produce a substantial decrease in undesirable child behavior in the home and in the classroom. Although not common practice among public school personnel, collaborating with parents in identifying the targeted behavior(s) served to actively involve the parents in the overall intervention process. And, training parents in child-specific behavior management strategies and simultaneously introducing the strategy in both settings provided a consistent approach to intervention.
Although the present study contributes to the available literature on teacher-parent collaboration, one limitation was the inability to conduct a long term, follow-up evaluation. The follow-up results reported for students' 2 and 5 should be interpreted with caution as the school year had ended and there was no opportunity to continue to measure the maintenance of treatment effects. In the future, it would be useful to obtain a fuller, more complete measure of the durability of treatment effects.

Only recently have special educators begun to receive training in the area of "indirect services" -- that is, to collaborate with peers and parents in resolving children's learning and behavior problems (Gable, Young & Hendrickson, 1987). Limited research does suggest that the consulting teacher must employ proven techniques for promoting full involvement of all parties in order for any intervention to be successful (e.g., Friend, 1985; Idol-Maestas & Ritter, 1985). There is also accumulated evidence of the importance of engaging persons indigenous to the child's natural environment in the intervention process in order to promote maintenance and generalization of behavioral gains (Gable et al., 1988). Although few special education teachers have yet to be trained in the so-called "process skills" that have proven effective in collaborating with colleagues and parents, available research clearly supports this aspect of teacher preparation. While parents are no longer excluded from dealing with behavior problems of their offspring
their role is still too often ignored (e.g., Gartner, 1988). Even so, the establishment of a school-home programming partnership is critical to the successful treatment of many children's behavior problems.
References


Parent Training

Modification, 1, 93-108.


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Student 1

Classroom

Home

Frequency of Finger Chewing

56
48
40
32
24
16
8
0

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90
Student 2

Classroom

Home

Frequency of Cup Throwing

30 31
Student 5

Classroom

Home

Frequency of Spitting

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90
Student 2

Classroom

Home

Frequency of Cup Throwing

March  April  May  June

13 17 20 24 3 7 10 14 17 21 24 28 1 5 8 12 15 19 22 26 29 2 5 9