

Journal of Abnormal Child Psychology (1985) 13 (1): 101-117.

DOI: 10.1007/BF00918375

A Comparison of the Effects of Child Management and Planned Activities Training in Five Parenting Environments

Matthew R. Sanders and Alison P. Christensen

The University of Queensland

Abstract

This study compared the effects of two procedures designed to enhance the extratraining effects of behavioral parent training. Twenty parents of oppositional children were randomly assigned to either a child management training condition or a combined child management plus planned activities condition. A further 10 nonproblem children and their parents served as a social validation group. Observations of both parent and child behavior were conducted in each of five home observation settings (breakfast time, kindy (kindergarten) or school exit, a structured playtime, bathtime, and bedtime). Both training procedures resulted in changes in both child oppositional and parent aversive behavior in all observation settings. In addition, desired positive parenting behaviors also improved in all settings. Treatment effects were maintained in all settings at 3-month follow-up. Comparisons between oppositional children following treatment and children in the social validation group showed that they each displayed similarly low levels of oppositional behavior in all settings. The implications of the results for facilitating generalized changes in behavioral parent training are discussed.

Research into behavioral parent training has increasingly recognized the need to train parents in multiple skills such as prompting, instruction giving, praise, response-cost, extinction, and time-out to effectively modify oppositional behavior in the home (Forehand & Atkeson, 1977; Forehand & McMahon, 1981). Furthermore, multifaceted training procedures (e.g., instructions, modeling, and differential feedback to parent following observation of parent-child interaction in either the clinic or the home) are required to achieve the above goal (Koegel, Glahn, & Nieminen, 1978; Sanders, 1982). However, some parents have considerably more difficulty than others in generalizing their newly acquired parenting skills from one setting, behavior, sibling, or time to another (Griest, Forehand, & Wells, 1981; McMahon, Forehand, Griest, & Wells, 1981; Sanders & James, 1983; Wahler, 1980).

This lack of consistent response by parents to training procedures has prompted researchers to identify marital, psychopathological, attitudinal, socioeconomic, and community contact variables that will discriminate families who are successful and unsuccessful in parent training (Griest & Wells, 1983; Wahler & Graves, 1983). Other research has shown that parents may have more difficulty in applying contingency management procedures in some settings than in others (Miller & Sloane, 1976; Sanders & Dadds, 1982; Sanders & Glynn, 1981). For example, some parents may require setting specific interventions to manage their children at mealtimes, bedtime, or on visits to the community such as shopping trips or dining out (Bauman, Reiss, Rogers, & Bailey, 1983; Sanders & Hunter, 1984). Clearly there is a continuing need to investigate the relative merits of different procedures for enhancing parents' application of behavioral skills across different parenting environments and over time.

At least two alternative strategies have been documented in the literature for enhancing parents' implementation of behavioral procedures across settings. The first was described by Sanders and Dadds (1982) as Planned activities training. This procedure was based on earlier work by Risley and his colleagues in child care centers (O'Brien, Porterfield, Herbert-Jackson, & Risley, 1979; Quiltich & Risley, 1973; Risley, Clark, & Cataldo, 1976). The strategy involved, first, the identification of specific child care settings in which parents had reported difficulties in implementing behavior change procedures such as time-out, praise, or the calm use of terminating instructions. Then, parents were taught a broad range of stimulus control and organizational skills such as the advance planning of an outing, how to organize oneself to prevent last-minute rushing, how to establish and discuss ground rules specific to the setting, how to role-play and rehearse the correct behavior with the child, and how to select and arrange activities to engage the child in the setting. Parents were then taught how to apply these general skills across multiple parenting situations both in the home and in the community (e.g., visiting grandparents, shopping).

An alternative strategy, exemplified by the work of Forehand and his colleagues (e.g., Forehand & McMahon, 1981) has involved training parents to employ multiple child management skills (e.g., the use of clear instructions, praising, extinction, time-out) across a variety of different target behaviors. In this way, parents' implementation of behavioral skills would be cued by a diverse range of child-initiated stimuli (e.g., prosocial behavior, demanding, noncompliance, whining, fighting). This approach, which teaches parents to deal with response "classes," can be contrasted with the training procedures described by Patterson (e.g., Patterson, Reid, Jones, & Conger 1975), which focused more heavily on teaching parents to control two or three individual target behaviors. Both enhancement procedures described above have similarities to the technique described by Stokes and Baer (1977) as "training sufficient exemplars," in that planned activities training teaches parents to apply skills across both multiple behaviors and settings, while child management training teaches parents to apply skills across multiple behaviors but with less explicit emphasis on environment prevention skills, as they apply to different settings.

There are few available data examining the differential effects of either procedure on enhancing parents' use of behavioral skills across settings. In three previous studies, when procedures similar but not identical to the planned activities training employed in the present study were used, planned activities training followed up to 3 weeks of child management training in which parents were taught both stimulus control and contingency management skills (Dadds, Sanders, & James, 1982; Sanders, 1982; Sanders & Dadds 1982). In each of those studies the addition of setting-specific interventions enhanced the extratraining effects of child management training alone. However, it is plausible that had a longer period of child management training been provided, parents might have eventually generalized their skills across settings. The present study aims to clarify using a group design, the differential effects of child management training alone and a combined child management training plus planned activities training package, on both parent and child behavior in each of five home observational settings. Another important issue in treatment outcome studies with families concerns the social validity of treatment effects (Kazdin, 1977; McMahon & Forehand, 1983; Wolf, 1978). In particular, it is unclear whether oppositional children following treatment differ in important ways from "nonproblem" children. Moreover, most studies on parent-child treatment have collected observational data in only one home setting. The present study aimed to clarify whether oppositional children after treatment could be discriminated from nonproblem children across a variety of parenting situations.

METHOD

Subjects

Twenty children ranging age from 2.5 years to 7.0 years (mean = 4.1 years) participated in this study. These children were randomly allocated to either a Child Management Training Alone condition or a Child Management Training plus Planned Activities Training condition. All children had been referred to the project by their parents for oppositional behavior at home, following advertising of the program in local newspapers. Children were selected for treatment provided they met the following criteria: The child's parents complained about persistent noncompliant, aggressive, or demanding behavior; an initial prebaseline home visit confirmed that the child displayed high rates of problem behavior; the child was not mentally retarded, hyperactive, or displaying overtly psychotic behavior; and the child was not currently under treatment from other agencies. There were six boys and four girls in each treatment group. Mothers of oppositional children had mean ages 30.8 years (Child Management group) and 30.3 years (Planned Activities group). The respective ages of fathers were 34.1 and 32.5. All parents in both groups were lower middle or middle class and had intact marriages. The mean number of children per family was 2.2.

A further 10 nonproblem children (7 boys and 3 girls) served as a social validation comparison group following advertising of the program at local kindergartens. These children ranged in age from 3.5 years to 7 years (mean = 4.2 years). Children were included in this group providing parents did not report any serious behavior problems, prebaseline observations in the home confirmed that the child displayed a low rate of problem behavior, the child was not mentally retarded, and the child did not display any other behavioral disturbance (e.g., language or developmental delay). Parents of control children had mean ages of 32.5 years (mothers) and 32.5 years (fathers). All parents were lower middle and middle class and had intact marriages. The mean number of children per family was 2.1.

Observational Settings

Observations of mother-child behavior in each family were conducted in each of five different observation settings in the home on 2 different days, in each phase of the study. These settings comprised two early morning parenting situations, and three late afternoon/early evening settings. These settings were select to sample children's behavior in four common child care or parenting situations (mealtimes, getting ready for school or kindy exit, bathtime, and getting ready for bedtime). A fifth setting embodied a structured play activity in which the parent and child interacted in a game. Families were asked to carry on with the usual family routine during observations. During each home observation all family members were present, with the exception of fathers during the kindy exit setting and the structured play setting. During home observations observers arrived at the scheduled time, stationed themselves as unobtrusively as possible, and signaled to the parent when the observation was about to begin. Observers were instructed to avoid all eye contact with children and parents, and to ignore the children if approached by them. Identical observation procedures were used for the treatment groups and the social validation group.

Observations were conducted in two time blocks, an early morning period and an afternoon/early evening period. Observers arrived at the family home at 7:00 am. The first observation session (*breakfast*) began as soon as the parent began serving the meal and continued for 30 minutes. Observers then asked the mother the time the child would be leaving for kindy or school (in the case of school-aged children), and observers commenced the second observation 30 minutes prior to the scheduled time.

Afternoon observations recommenced at 4:00 p.m. with a *structured play activity*. During this observation parents were asked to set the child up in an activity (e.g., game) in which the target child, siblings, and the mother could be involved, to ensure that all family members remained in the kitchen, lounge, family room, or dining room areas, and to turn off the television sets. The observation then commenced and continued for 30 minutes. *Bathtime* observations commenced following the parents' first instruction to the child to go to the bathroom and continued for 30 minutes. *Bedtime* observations commenced approximately 30 minutes prior to the child's scheduled bedtime.

Observational Measures

Ten observers were trained to employ a partial interval time-sample observation procedure (Sulzer-Azaroff & Mayer, 1977) to record oppositional behavior in each observation setting. Child behavior was sampled in observation blocks of 45 seconds (25 seconds for observation and 20 seconds for recording). This observe-record cycle was repeated 40 times until 30 minutes of observation had been completed in each observation setting. A tape recorder cued the observer to observe or record according to the schedule. Observers were not informed as to which families were in each experimental group.

The following child behaviors were observed (detailed category definitions and scoring criteria are available from the senior author):

1. *Noncompliance* (refusal to initiate compliance with specific instructions within 5 seconds).
2. *Complaints* (verbal complaints involving whining, screaming, vocal protests, or temper outbursts).
3. *Aversive demands* (instructions directed to another person by the child scored as aversive of unpleasant-e.g., "Give me my truck back").
4. *Aggression* (actual or threatened attacks or damage to another person or destruction of an object or materials-e.g., punching, biting).
5. *Noninteraction* (absence of interactions with persons or play objects, repetitive object manipulation, or self-stimulation-e.g., face slapping).
6. *Oppositional* (other inappropriate behaviors that are not included above-e.g., breaking family rules, teasing).

The following parent behavior categories were observed:

1. *Praise* (any nonaversive comment of approval offered to the child by the parent; it may be descriptive or global).
2. *Contact* (any contact deemed to be nonaversive--i.e., not causing or having the potential to cause pain or discomfort).
3. *Aversion contact* (any contact causing or having the potential to cause pain or discomfort in the child).
4. *Questions* (any nonaversive request for information from the child).

5. *Aversive questions* (any request for information deemed aversive due to content or tone of voice).
6. *Alpha instructions* (any verbal command that is clear and has a specific behavioral referent, and is presented nonaversively).
7. *Aversive alpha instruction* (any verbal command that is clear, has a specific behavioral referent, but is presented aversively).
8. *Beta instruction* (any verbal command that is unclear, lacks a specific behavioral referent, and is presented calmly).
9. *Aversive beta instruction* (any verbal command that is unclear, lacks a specific behavioral referent, and is presented aversively).
10. *Social attention* (any nonaversive attention, verbal or nonverbal, that cannot be scored under other categories, whether it was parentinitiated or in response to child.)
11. *Aversive social attention* (As above, except deemed to be aversive due to content or voice presentation).

From this observation system, dependent measures employed in this study were as follows: (1) the percentage of time intervals of oppositional behavior which was calculated by summing the number of intervals containing oppositional behavior and dividing by the total number of intervals), (2) the percentage of time intervals of aversive parent behavior (which was calculated in the same way as for oppositional behavior), (3) the percentage of time intervals of nonaversive parent behavior (which was similarly calculated as for oppositional behavior).

In each interval, observers scored the presence or absence of each behavior category. Observer training consisted of eight 2-hour sessions during which observers were instructed in the use of the schedule. Training consisted of using videotapes, lectures, and discussion. Training was completed when each observer reached a satisfactory level of reliability on an unfamiliar video example of family interaction.

Calculation of Interobserver Agreement Interobserver agreement reliabilities were calculated on observational data in each of the five observational settings for all families in each group. Reliability checks were conducted in each observation setting and overall in 20% of all observation sessions. Overall, occurrence, and nonoccurrence agreement reliabilities were calculated separately using the formula described by Hopkins and Hermann (1977) on an interval-by-interval basis. Occurrence agreements were defined as any interval in which both observers recorded the occurrence of the relevant behavior. Nonoccurrence agreements were defined as any interval in which both observers recorded the nonoccurrence of the relevant behavior.

Consumer Satisfaction Measures

Following the completion of follow-up observations, parents completed a consumer satisfaction questionnaire assessing parents' subjective views on the training they had received, the usefulness of different training procedures, and the extent to which they considered their child's behavior had changed as a result of training in a variety of home and community settings.

Procedure

Baseline. Baseline observations were conducted to establish basal levels for each response category. *Child Management Training Alone.* Therapists for both treatment groups were the two authors plus eight psychologists, practicing in the area of family intervention, or graduate clinical psychology students. The latter received 18 hours of training under the supervision of the authors. All therapists employed the same training procedures in working with an assigned family, and treated one family from each treatment group. The duration of treatment for each group was 7 weeks.

Parents in the Child Management Training Alone condition received a training format similar to that described by Sanders and Dadds (1982). Therapists explained the treatment program didactically, then gave parents examples of how to use descriptive praise and other contingent responses to increase appropriate behavior. Six management procedures for use with six classes of deviant behavior (e.g., noncompliance, aggression) were presented didactically, by modeling, and by behavior rehearsal. Parents were taught to respond to these behaviors by a variation on the following procedure, individualized for the particular target behavior that occurred: (1) Gain the child's attention, (2) describe calmly what the child has done wrong, (3) describe and prompt the correct behavior, (4) give further prompt if required, (5) speak up and praise the correct behavior if it occurs, and (6) if the problem

worsens, deliver a terminating instruction describing the incorrect behavior and back it up with a response-cost contingency (e.g., remove troublesome toy with a brief explanation). If noncompliance with the terminating instruction occurs, put the child in the bathroom for a 2-minute time-out period. Minor whining was handled by an extinction procedure.

After the initial presentation of the above material to parents during two 1189 sessions, twice-weekly home feedback visits were implemented, during a structured play activity at times that were convenient to the parents and therapists. During these visits, the therapist observed the parent-child for 25 minutes and then reviewed the parents' use of praise and correction procedures with the parent. First, parents were prompted to take responsibility for critically reviewing their own behavior; then, the outcome of this review was recorded and a written feedback form was given to the parents, outlining current strengths, weaknesses, and goals for the next home observation session. These home feedback sessions continued for 7 consecutive weeks. When training had been completed, parents were instructed to continue to apply management procedures. No contact with the therapist occurred between the termination of treatment and follow-up.

Child Management plus Planned Activities Training. For families in the second treatment group, following 3 weeks of Child management training, parents met with their therapist and were introduced to the planned activities procedures. During this phase, parents continued to apply the same consequences for desired and undesired behavior as in the previous phase. Planned activities training involved teaching parents a generalized set of problem-solving strategies aimed at preventing or at least reducing the likelihood of problem behavior in specific settings. The procedure combines strategies of rearranging the stimulus environment of both parent and child and incidental teaching procedures described by Hart and Risley (1975).

These goals were accomplished by sequentially introducing parents to the following skills: (1) how to prepare for situations in advance by organizing and managing time more effectively, (2) how to discuss rules regarding desired and undesired behavior in a relaxed and noncoercive manner, (3) how to select engaging activities for children in specific home and community settings, (4) how to encourage and extend children's engagement in activities by the use of incidental teaching procedures, (5) how to select and apply practical incentives for motivating children's desired behavior in different child-rearing situations, (6) how to select practical consequences for undesired behavior in the same settings, and (7) how to hold discussions with children following an activity to give feedback on desired and undesired behavior.

Each of the above steps was introduced in the clinic using discussion, modeling, role-play, and feedback procedures, and then biweekly home feedback continued for a further 4 weeks. Parents were first introduced to the problem-solving method in the context of *two* settings (either home or community) and then to *three* additional settings (e.g., when visitors arrive, traveling in the car, getting a child ready for bed) selected from the list of settings in Table I. A checklist of specific parenting behaviors for each of nine parenting settings in the home and eight parenting settings in the community was listed on self-monitoring cards. Parents recorded whether they completed the required tasks on three consecutive occasions in each setting they had selected to work on.

When 4 weeks of planned activities training had been completed, home feedback sessions ceased and the parent was instructed to continue applying management procedures in all settings without using selfmonitoring checklists. No further therapist contact occurred during the follow-up period.

Follow-Up. Three months following the termination of treatment a further 2 days observation were conducted for each family.

RESULTS

Reliability of Observations

The mean levels of interobserver agreement for oppositional behavior were 95.8 (range 77.5-100.0) for overall reliability, 78.4 (range 71.5-100.0) for occurrence reliability, and 91.8 (range 78.1-100.0) for nonoccurrence reliability, and in all instances exceeded chance levels of agreement. The mean level of interobserver agreement across all nonaversive parent behavior was 96.2 (range 82.6-98.4) for overall reliability, 86.5 (range 76.1-100.0) for occurrence reliability, and 93.2 (range 87.5-100.0) for nonoccurrence reliability. The corresponding figures for

aversive parent behavior were 93.2 (range 88.3-100.0) for overall, 84.9 (range 74.2-100.0) for occurrence reliability, and 93.6 (range 81.1-100.0) for nonoccurrence reliability.

Table I. Examples of High-Risk Settings Used in Planned Activities

Home settings	Community settings
Getting children off to bed	Taking children on shopping trips
Encouraging independent play when you are necessarily busy	Traveling in the car
Getting ready to go out	Handling disruptions during business trips
Teaching children to pick up and put away	Leaving children with friends, relatives, and child-minders
Planning and meal preparations	Managing disruptions during children's birthday parties
Handling mealtime disruptions	Preparations for attending church
When visitors arrive around home	

Changes in Oppositional Behavior

Figure 1 presents the mean percentages of oppositional child behavior in each phase for both groups. A three-way mixed-design ANOVA was performed on the percentages of oppositional behavior using Groups (CMT vs. CMT and PAT), Phases (baseline, posttreatment, follow-up) and settings (e.g., breakfast) as the factors. Significant main effects for phases ($F = 28.03, df = 2, 36, p = .0004$) were found indicating that treatment was effective in reducing levels of deviant behavior. Subsequent Newman-Keuls comparisons of mean pairs showed that there was a significant reduction ($p < .01$) in levels of deviant behavior in each setting for both groups from baseline to posttreatment and from posttreatment to follow-up. Following treatment, while the mean percentages of deviant behavior had reduced in each setting, bedtime and breakfast were associated with significantly higher rates of oppositional behavior than other settings.

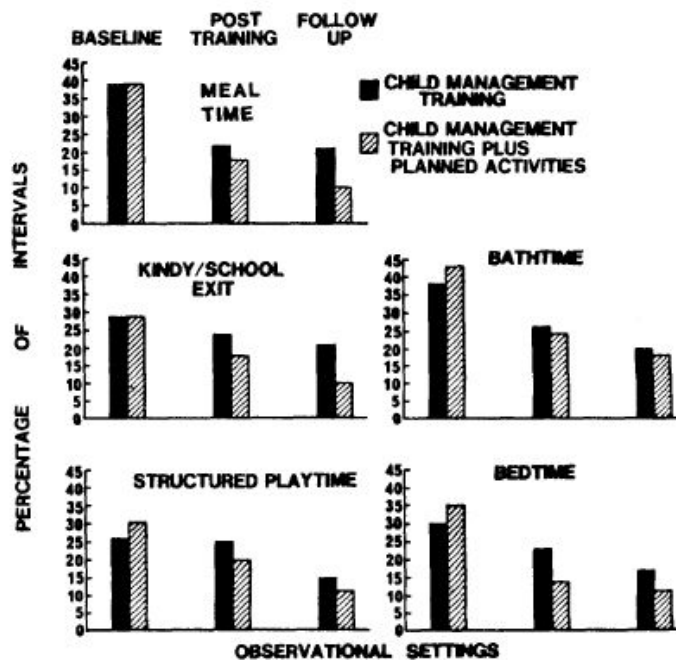


Fig. 1. The mean percentage of intervals of oppositional child behavior in each observation setting.

Changes in Aversive Parent Behavior

Figure 2 shows the mean percentage of aversive parent behavior in each setting. Using the same statistical procedures, similar results were found. Once again there were significant main effects for phases ($F = 33.15, df = 2, 36, p = .000002$) and settings ($F = 9.28, df = 4, 72, p = .0003$). Subsequent Newman-Keuls analysis revealed that there was a significant reduction in levels of aversive parent behavior from baseline to posttreatment ($p < .01$). These changes were maintained at follow-up. Aversive parent behavior was significantly higher ($p < .01$) at bathtime, compared to all other settings. There were no other significant differences between settings ($p < .05$).

Changes in Nonaversive Parent Behavior

Figure 3 shows the mean percentage of nonaversive parent behavior in each setting. Analysis of these data, using mixed-design ANOVAs and Newman-Keuls comparisons, showed significant main effects for phases ($F = 10.1, df = 4, 72, p = .0002$) and settings ($F = 32.89, df = 2, 36, p = .000002$) and for the interaction of phases and settings ($F = 2.06, df = 8, 144, p = .04$).

Analysis of simple main effects were performed to pinpoint the interaction. This analysis showed that the rates of nonaversive parent behavior at breakfast and bathtime showed greater improvement than in other settings from baseline to posttreatment, but not from posttreatment to follow-up. Hence, irrespective of the treatment package employed, there was an improvement in nonaversive parent behavior in all settings.

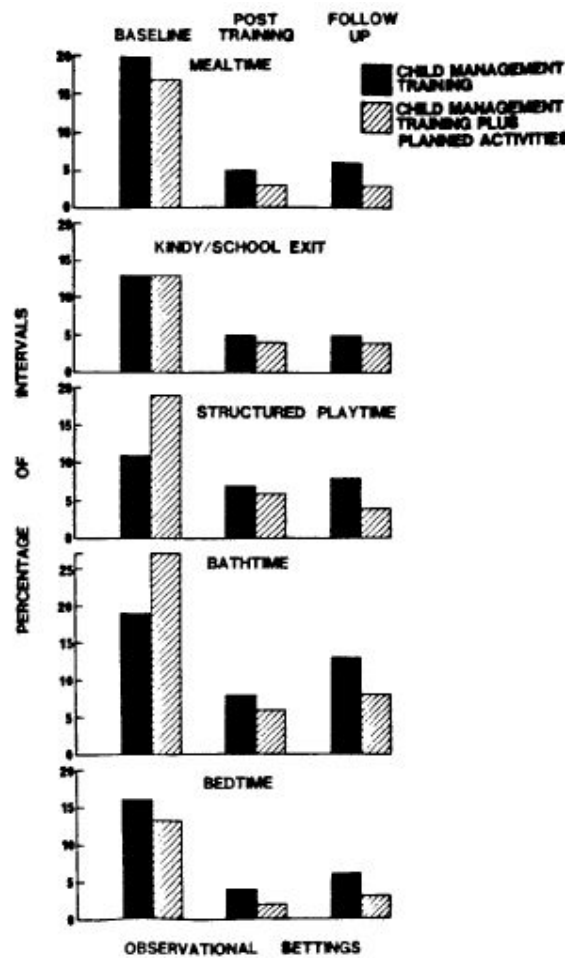


Fig. 2. The mean percentage of intervals of aversive parent behavior in each observation setting.

However, the improvement appears to be greater in settings such as mealtime and bathtime.

Social Validation of Treatment Effects

Figure 4 shows the mean percentage of oppositional behavior for both treatment groups and the social validation group at follow-up. A two-way ANOVA (Groups • Settings) failed to show significant effects for either factor. These findings suggest that at 3-month follow-up there were no differences in the levels of deviant behavior between oppositional children and nondeviant controls. Data on parents of nonproblem children were unfortunately not available for statistical analysis. Hence, it is not possible to say whether levels of aversive or positive parent behaviors differed between the treatment and social validation groups.

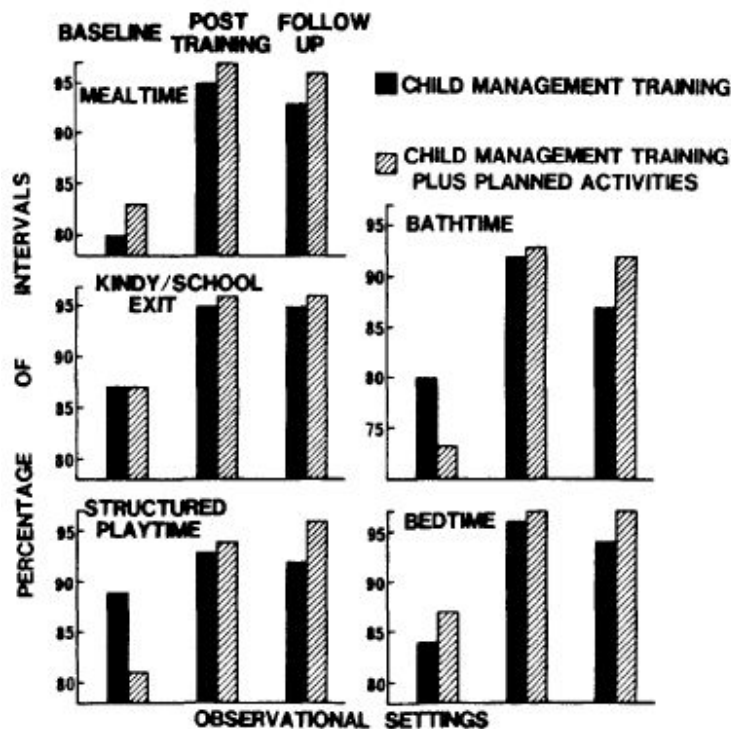


Fig. 3. The mean percentage of intervals of nonaversive parent behavior in each observation setting.

The consumer evaluation questionnaire completed by parents at 3-months follow-up showed that both treatment procedures were evaluated in a highly favorable manner by parents. Of the parents who received the combined treatment package, all reported that their child's behavior had improved in the home, and 9 out of 10 parents thought their child's behavior had also improved in the community. Nine of the 10 parents who received child management training alone reported improved behavior at home, while only 8 of 10 reported improved behavior in the community.

DISCUSSION

The present study shows that child management training (CMT) alone and CMT combined with planned activities training are effective procedures for reducing oppositional behavior, for increasing positive parent behavior, and for reducing aversive parent behaviors in a wide variety of parenting situations. Changes in both parent and child behavior was maintained over time, without any posttraining or therapist contact or booster sessions. Furthermore, target children at follow-up could not be differentiated from nonproblem children on levels of oppositional behavior. However, settings that occasioned the highest levels of oppositional behavior and coercive behavior at baseline maintained that relative position following treatment, suggesting that some settings may be intrinsically more

difficult for parents to cope with. This finding is consistent with the results of a study by Sanders and Christensen (1983), which showed that there are differences in the naturally occurring rates of both oppositional and coercive parent behavior across different child care activities. It would be interesting to know what features of a setting pose particular difficulties for parents.

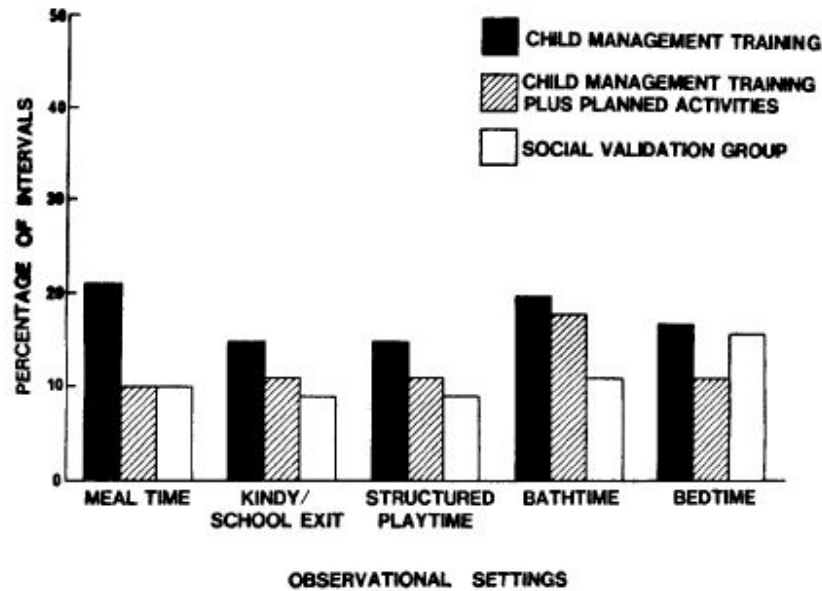


Fig. 4. The mean percentage of intervals of oppositional child behavior of the two treatment groups and the social validation group.

The failure of planned activities training to produce effects superior to those of child management training alone at first seems inconsistent with previous research on the matter. However, some important methodological differences between this study and earlier research (e.g., Sanders & Dadds, 1982) may account for these results. In at least two earlier studies the generalization effects of treatment were assessed partly or wholly through observations in community settings, whereas all observations in the present study were in the home. Planned activities training may produce greater effects in community settings. In retrospect, community observational data might provide a more stringent test of the differential generalization effects of the two procedures.

Second, child management training alone is clearly an effective treatment procedure itself, one that produces generalized effects across multiple settings for at least some families. The addition of planned activities may have failed to produce significant group differences because of ceiling effects. Setting specific training procedures such as planned activities may be more useful when parents fail to spontaneously generalize their skills across home settings or when generalization to the community is required (Sanders & Glynn, 1981; Sanders, 1982). In previous research, planned activities training has tended to be used with parents who have failed to spontaneously generalize their skills to all relevant settings (Sanders, 1982).

Some parents may not require setting-specific interventions, providing the therapists cue the parent to employ behavior change skills in all relevant circumstances. However, other parents may require setting-specific training when the child is considerably more difficult in some settings than in others, or the parent engages in consistently higher rates of coercive behavior at particular times or settings (e.g., at bedtime). The need for planned activities training may also be determined in part by the entry behaviors of the parent. For example, where parents have a very limited repertoire of play engagement skills or engage in low overall rates of interaction with the child, or where the environment is bereft of age-appropriate play materials, planned activities training may be a useful adjunctive procedure to more standard training formats to facilitate changes in both parent and child behavior in multiple settings.

The present study involved teaching parents general contingency management procedures *before* they received instruction in planned activities skills. An alternative approach may involve teaching parents to employ both contingency management and planned activities procedures in specific settings (e.g., mealtimes, getting ready to go out) in graduated fashion. For example, training could commence by selecting settings that the parent is likely to be initially successful with; then, increasingly more diverse or complex settings could be sequentially introduced until the parent showed some evidence of spontaneous generalization to as yet untrained settings.

Planned activities training introduces parents to some important additional educational and relational skills (e.g., incidental teaching shows parents how to use child-initiated instances of interaction as opportunities to prompt and elaborate children's language and social skills; how to engage children in interesting and meaningful activities in settings in which they might otherwise be bored and have nothing to do; how to avoid problem behaviors through advance preparation, planning, and environmental organization). Ultimately, such strategies may be seen as more acceptable solutions to problem behaviors than are approaches that focus exclusively on contingency management. Clearly, however there is a need for further clarification of the *community* generalization effects of child management and planned activities training.

In retrospect, it would have been better to conduct observations for the social validation group throughout the course of treatment for treatment groups. Despite this limitation, social validation results were encouraging. Apart from high levels of parent satisfaction with treatment results in both treatment groups, observational data show that treated children could not be differentiated from nonproblem families in a range of home settings. Further research is required to clarify the generalization effects to educational settings (e.g., preschool, school).

Acknowledgements

This study was supported by a grant from the National Health and Medical Research Council (NHMRC324 82 579049). We wish to thank all families, therapists, and observers who participated in the project.

REFERENCES

- Bauman, K. E., Reiss, M. L., Rogers, R. W., & Bailey, J. S. (1983). Dining out with children: Effectiveness of a parent advice package on pre-meal inappropriate behavior. *Journal of Applied Behavior Analysis*, *16*, 55-68.
- Dadds, M. R., Sanders, M. R., & James, J. E. (1982). *Programming for generalization and maintenance in parent training through planned activities and social support*. Paper presented at the Fifth National Conference on Behavior Modification, Surfers Paradise, Queensland, Australia.
- Forehand, R. & Atkeson, B. M. (1977). Generality of treatment effects with parents as therapists: A review of assessment and implementation procedures. *Behavior Therapy* *8*, 575-593.
- Forehand, R., & McMahon, R. J. (1981). *Helping the non-compliant child: A clinician's guide to parent training*. New York: Guilford Press.
- Griest, D. L., Forehand, R., & Wells, K. C. (1981). Follow-up assessment of parent training: An analysis of who will participate. *Child Study Journal*, *11*, 221-229.
- Griest, D. L., & Wells, K. C. (1983). Behavioral family therapy with conduct disorders in children. *Behavior Therapy*, *14*, 37-53.
- Hart, B. M., & Risely, T. R. (1975). Incidental teaching of language in the preschool. *Journal of Applied Behavior Analysis*, *8*, 411-420.
- Hopkins, B. L., & Hermann, J. A. (1977). Evaluating interobserver reliability of interval data. *Journal of Applied Behavior Analysis*, *10*, 121-126.
- Kazdin, A. E. (1977). Assessing the clinical or applied importance of behavior change through social validation. *Behavior Modifications*, *1*, 427-452.
- Koegel, R. L., Glahn, T. J., & Nieminen, G. W. (1978). Generalization of parent training results. *Journal of Applied Behavior Analysis*, *11*, 95-109.
- McMahon, R. J., & Forehand, R. L. (1983). Consumer satisfaction in behavioral treatment of children: Types, issues and recommendations. *Behavior Therapy*, *14*, 209-225.
- McMahon, R. J., Forehand, R., Griest, D. L., & Wells, K. C. (1981). Who drops out of therapy during parent behavioral training. *Behavior Counselling Quarterly*, *1*, 79-85.
- Miller, S. J., & Sloane, H. N. (1976). The generalization effects of parent training across stimulus settings. *Journal of Applied Behavior Analysis*, *9*, 355-370.
- O'Brien, M., Porterfield, J., Herbert-Jackson, E., & Risley, T. R. (1979). *The toddler center: A practical guide to day care for one and two year olds*. Baltimore: University Park Press.
- Patterson, G. R., Reid, J. B., Jones, R., & Conger, R. E. (1975). *A sociallearning approach to family intervention: Families with aggressive children* (Vol. 1). Eugene, Oregon: Castalia.
- Quiltich, H. R., & Risely, T. R. (1973). The effects of play materials on social play. *Journal of Applied Behavior Analysis*, *6*, 573-578.
- Risely, T. R., Clark, H. B. & Cataldo, M. F. (1976). Behavioral technology for the normal middle-class family. In E. J. Nash, L. A. Hamerlynck, & L. C. Handy (Eds.), *Behavior modification and families*. New York, Brunner/Mazel.

- Sanders, M. R. (1982). The generalization of parent responding to community settings, the effects of instructions, plus feedback and self-management training. *Behavioral Psychotherapy*, *10*, 273-287.
- Sanders, M. R., & Christensen, A. P. (1983). *An analysis of children's oppositional behaviour and parents' coercive behavior across five parenting environments*. Paper presented at the Sixth National Conference on Behavior Modification, Adelaide, South Australia.
- Sanders, M. R., & Dadds, M. R. (1982). The effects of planned activities and child management procedures in parent training: An analysis of setting generality. *Behavior Therapy*, *13*, 452-461.
- Sanders, M. R., & Glynn, T. (1981). Training parents in behavioral self-management: An analysis of generalization and maintenance. *Journal of Applied Behavior Analysis*, *14*, 233-237.
- Sanders, M. R., & Hunter, A. C. (1984). An ecological analysis of children's behaviour in supermarkets. *Australian Journal of Psychology*, *36*, 415-427.
- Sanders, M. R., & James, J. E. (1983). The modification of parent behavior: A review of generalization and maintenance. *Behavior Modification*, *7*, 3-27.
- Stokes, T. F., & Baer, D. M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis*, *10*, 349-367.
- Sulzer-Azaroff, B., & Mayer, B. (1977). *Applying behavior analysis procedures with children and youth*. New York: Holt, Rinehart & Winston.
- Wahler, R. G. (1980). The insular mother: Her problem in parent-child treatment. *Journal of Applied Behavior Analysis*, *13*, 207-209.
- Wahler, R. G., & Graves, M. G. (1983). Setting events in social networks: Ally or enemy in child behavior therapy. *Behavior Therapy*, *14*, 19-36.
- Wolf, M. M. (1978). Social validity: The case for subjective measurement or is applied behavior analysis finding its heart. *Journal of Applied Behavior Analysis*, *11*, 203-214.