

## **A Medication-Free Parent Management Program for Children Diagnosed as ADHD**

**David B. Stein, PhD**  
*Longwood College, Farmville, VA*

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Currently popular parent management training programs are centered on the use of stimulant medication and appear to have only moderate success rates with Attention Deficit Hyperactivity Disorder (ADHD) children. Programs focus on antecedent events where parents give children considerable reminding and assistance. This study involves a major redesigning of parenting techniques into a medication-free approach called the Caregivers Skills Program (CSP), which trains parents in the consequent contingency management skills. Thirty-seven children aged 5 to 11, all meeting DSM-IV criteria for ADHD, participated. Those receiving stimulant medication had it discontinued prior to the study. All participants went through a single case study of: baseline (each lasting 4 weeks), cognitive focus therapy, parent home-based management, and a follow-up assessment at 1 year. After the parents were trained and began implementing the CSP, 11 out of 12 targeted behaviors improved dramatically or disappeared; only aggressive behavior did not. For 81% of the children, gains generalized to school where attention, conduct and grades improved. The remaining 19% (7) children were placed on a Daily Report Card program to facilitate feedback to the parents who carried out contingencies at home. Within 4 weeks, these children had passing grades in all subjects and improved attention and conduct above the criterion level. A 1-year follow-up assessment indicated that all gains remained stable. After the intervention or at follow-up, no child still met DSM-IV criteria for ADHD.

These findings support the usefulness of a medication-free CSP model. Limits of the study include a single-case design without return to baseline after each phase, the use of a single ADHD checklist, and a single therapist. More carefully controlled studies of CSP are needed.

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Actualmente los programas populares para entrenar a los padres en el manejo de sus niños, están centrados en el uso de medicamentos estimulantes y parecen tener niveles de éxito solo moderados con niños con ADHD. Los programas se enfocan en eventos precedentes donde los padres les dan a sus niños considerable refuerzo y asistencia. Este estudio trata de un mayor

rediseño de las técnicas paternas hacia un acercamiento libre de medicamentos, llamado «Programa de Habilidades Para Orientadores» (Caregivers Skills Program—CSP), el cual entrena a los padres en las consecuentes contingencias en el manejo de las destrezas. Participaron treinta y siete niños entre las edades de cinco y once años, todos los cuales cumplieron el criterio del DSM-IV para ADHD. Si recibían medicamento estimulante, les fue descontinuado antes del estudio. Todos los participantes completaron un solo estudio de caso de: Línea de fondo (cada una de cuatro semanas), terapia de enfoque cognitivo, manejo casero por los padres y un seguimiento después de un año. Luego de que fueron entrenados los padres y empezaron a implementar el CSP, once de los doce objetivos de conducta mejoraron dramáticamente o desaparecieron; solo el comportamiento agresivo no mejoró. Para 81% de los niños, los beneficios se generalizaron al ambiente escolar donde la atención, conducta y notas mejoraron. Los otros siete niños (19%) fueron puestos en un programa de tarjeta de reporte diario para facilitar la retroalimentación a los padres, que manejaron las contingencias en casa. Dentro de un periodo de cuatro semanas, estos niños aprobaron todas las materias y mejoraron la atención y conducta más allá del nivel del criterio. Un seguimiento después de un año indicó que todos los beneficios permanecieron estables. Después de la intervención, durante el seguimiento, ningún niño llenó más el criterio para ADHD.

Estos hallazgos apoyan la utilidad de un modelo CSP libre de medicamentos. Las limitaciones del estudio incluyen un solo diseño de casos sin volver a la línea de fondo después de cada fase, el uso de una sola lista de cotejo ADHD y solo un terapeuta. Se necesitan más estudios cuidadosamente controlados de CSP.

Il existe plusieurs programmes pour aider les parents à modifier les comportements d'enfants diagnostiqués de trouble de déficit d'attention/hyperactivité (TDAH). Ces programmes sont organisés autour de l'utilisation de médication stimulante et démontrent des taux de succès modestes. Ils mettent aussi l'accent sur les événements antécédents, les parents offrant rappels et soutien considérables à l'enfant. Dans cette étude, nous modifions les techniques parentales en une approche sans médicaments, le *Caregiver Skills Program* (CSP), qui entraîne les parents à gérer les conséquences des comportements difficiles. Trente-sept enfants de 5 à 11 ans, répondant aux critères DSM-IV pour le TDAH, ont participé. La médication stimulante leur a été retirée avant l'entrée dans l'étude. Chaque sujet est passé par trois périodes (observation, thérapie cognitive, gestion parentale des comportements à la maison) de quatre semaines chacune. Une évaluation de suivi a eu lieu un an plus tard. Suite à l'entraînement des parents et la mise en oeuvre du CSP, 11 des 12 comportements ciblés chez les enfants se sont améliorés de manière remarquable ou ont disparu; seule l'agressivité s'est montrée réfractaire. Chez 81% des enfants, les acquis se sont généralisés à l'école, avec amélioration de l'attention, de la conduite et des notes. Les parents des autres enfants (19%) ont reçu un bulletin scolaire quotidien, leur permettant d'appliquer les contingences à la maison. En quatre semaines, ces enfants démontraient des notes de passage dans tous les sujets et une amélioration de l'attention et la conduite. Un an plus tard, tous les acquis étaient encore présents et aucun enfant ne répondait aux critères diagnostiques du TDAH. Ces résultats supportent l'utilité d'une approche de style CSP. Les limites de

l'étude incluent un devis de cas unique sans retour à une période d'observation après chaque étape, l'utilisation d'un seul instrument diagnostique pour le TDAH, ainsi qu'un seul thérapeute. D'autres études du CSP sont souhaitables.

Practitioners of behavioral therapy have long used social-operant parent training techniques to deal with behavioral problems of children. Patterson (1971) and Becker (1971) began this tradition nearly 30 years ago. Attempts at parent training for children diagnosed as ADD/ADHD have been made (Barkley, 1995; Parker, 1994; Phalen, 1984; Wright, 1997) but they have met with limited success (Barkley, 1995; Kendall, 1996). Stein (1999) points out that current approaches are piecemeal and lack a comprehensive program for training parents in the management of ADD/ADHD. Parents are given only brief suggestions in social learning techniques such as positive reinforcement (e.g., praise and tokens for correct behaviors), mild punishment (e.g., time-out and loss of privileges), contracting and other procedures (Kazdin, 1989). Almost universally these approaches are used with stimulant medication. They are designed as a supplement to help a child viewed as "diseased" and "incapable" (Barkley, 1987, 1990, 1991, 1995; Newby, 1996; Van-der-Vlugt, Pijnenburg, Wels, & Koning, 1995).

The disease issue is of central importance in understanding the development of behavioral parenting interventions. If one assumes that ADHD-labeled children are handicapped by a disease, then they are seen as needing considerable help and assistance to compensate for their supposed inabilities (Stein, 1999). Indeed, Barkley's (1995) parent-training techniques include composing chore cards as reminders of household jobs; having the child repeat parental commands; using token economy programs with posted rules, chores, or commands; using time-out with warnings and reminders about children's behaviors; using time-out in conjunction with the token program, where children are "reminded" before they lose tokens (response cost) or reminded not to leave their seat during time-out; and reminding (and reviewing with) children how they should behave before entering a public place. These techniques may be viewed as reinforcing a child's dependency on constant help from external sources (Stein, 1999).

Other parent training techniques exist, but they suffer from similar deficiencies. In Parker's (1994) techniques, children are warned of impending discipline if they do not behave or of impending spanking if they try to leave time-out, and they are given choices whenever they assert that they do not wish to comply with a parent's command. Parker recommends using a bathroom for time-out but this may contain dangerous and reinforcing items. Parker (1994) also recommends a self-monitoring technique, where the child takes a cassette tape to school which beeps periodically to remind him/her to pay attention to assignments. Again, this may prevent the child from learning to function on his or her own without reminders.

Phalen (1984) has popularized the "1-2-3 Time-Out" method. Here, three warnings are given to the child prior to being sent to time-out. This may also prevent the child from monitoring his or her own behavior and remembering what to do at all times. Hunter (1995) offers sparse behavioral parent training

suggestions, which include discussing children's expressions of feelings. However, discussions may serve to reinforce self-deprecating or negative verbalizations (Greenspoon, 1955). Wright (1997) advocates that parents should ignore temper tantrums and other disruptive behaviors and then discuss the problem with the child once he or she has calmed down. This can be interpreted as a delayed reinforcement schedule, which according to social learning theory can only enhance the resistance and delay the extinction of the inappropriate behaviors (Franks, 1969).

Many of these approaches also teach parents how to "cope with living with an ADHD child" (Barkley, 1995; Parker, 1994; Reichenberg-Ullman & Ullman, 1996; Wright, 1997). Such approaches may neutralize parents' motivation to be rigorous and consistent in disciplining their children (Stein, 1999). Cognitive-behavioral programs such as Petersen's (1992) "Stop, Think, and Do" techniques also invoke prompting and reminding before entering new environments. Hallowell and Ratey (1994) recommend that parents establish a structured environment with the abundant use of lists, notes, color-coding objects, reminders, and file cards. They also advocate tolerating bad moods, which means that parents ignore negative or self-deprecating remarks from their children. These authors recommend using time-out only when the parent is upset and cannot handle the child in a calm manner. From a social learning perspective, this approach may place the inappropriate behaviors on a partial reinforcement schedule, which may powerfully reinforce them (Franks, 1969). Finally, as mentioned, the use of stimulant drugs is advocated as the central focus for controlling children in each of these parenting programs (Barkley, 1995). To date, the programs used alone appear to have limited success (Kendall, 1996) but seem to work better when combined with medication at a reported rate of about 77% effectiveness (Barkley, 1995).

Used without medications, these parenting approaches may not be working well because they violate some fundamental principles of social learning theory. The techniques of cueing, reminding, helping, and discussing choices with a child at the moment of a misbehavior are very likely reinforcing that behavior (Franks, 1969). It is suggested that more careful adherence to the basic guidelines of operant conditioning in developing parenting programs can provide better results and realistic alternatives to drugs.

We agree with Kendall (1996) and Braswell and Bloomquist (1991) who view ADD/ADHD behaviors as a cognitive pattern where children do not actively attend to their behavior, the impact of their behaviors on others, and the consequences that may follow. Kendall (1996) labels this cognitive pattern as "not thinking." We propose that the parenting approaches previously reviewed produce unsatisfactory results because they fail to improve children's "thinking" and "awareness" and actually reinforce the "not thinking" and lack of awareness of ADHD-labeled children, as well as their failure to monitor themselves and, therefore, increase their dependency on constant help. Existing parenting programs emphasize children's compliance to external cues rather than self-monitoring and remembering independently at all times how they should behave. The evidence shows that when children are taken off medication and/or these excessive coaching approaches, the disruptive behaviors return (Whalen & Henker, 1991).

The aim of the present study is to test a parenting program called the Caregivers Skills Program (CSP). This program is designed to adhere more carefully to established social learning operant principles; to alter various behaviors associated with the ADHD label, and to restructure a cognitive pattern hypothesized to underlie these behaviors.

The CSP minimizes preceding cues and emphasizes instead parents' rigorous enforcement of consequent events to disruptive behaviors, i.e., contingency management. The three main goals of the CSP are (1) to expect the child to think, attend and self-monitor what he/she is doing without assistance, i.e., to reduce cognitive dependency; (2) to control his behavior in all settings and environments and thus (3) to accomplish cognitive and behavioral improvements without medication.

The design used in this study is that of a single case alternating treatment (Barlow & Hersen, 1988). However, because the study was conducted in the "real world" clinical conditions, where time spent with clients is restricted by "managed care" requirements, no attempt was made to return to baseline, as in classical applications of this design. Barlow and Hersen (1988), in their text on single-case designs, indicate that it is permissible to alternate treatments if return to baseline is not feasible.

The problem behaviors of children targeted by the CSP differ from those in the DSM-IV (American Psychiatric Association, 1994) criteria of ADHD. Careful reading of these criteria indicates that the majority of behaviors occur in school (Stein, 1999). In the CSP, however, it is hypothesized that one must get the child under control at home first and establish the parents as the final authorities. The CSP, therefore, targeted various disruptive behaviors of children that occur at home *before* implementing any school-focused intervention.

It is hypothesized that a comprehensive parent training model, called the Caregivers Skills Program (CSP) can, without medication, effectively reduce the behaviors, attentional problems, and cognitive patterns associated with children diagnosed as ADHD.

## METHOD

### Participants

Thirty-seven children were selected from a referral pool of 60 for involvement in this study. A behavioral checklist based exactly on the DSM-IV criteria for ADHD was used by the therapist in an interview with the parents for the evaluation and diagnosis of the children before and after the program. The children selected had to meet DSM-IV diagnostic criteria according to the behavioral checklist for ADHD, and had to present school-related problems with grades, complying with rules, peer interaction, and difficulties with authority. Attention Deficit Disorder without Hyperactivity (ADD), as per DSM-IV criteria, is not included in this study. The children were between the ages of 5 and 11, grades kindergarten through sixth. For 23 of the children, therapy had been requested by school authorities and for the remaining 14, therapy was requested solely by parents. Fifteen of the children were female and 22 were male.

All of the children were referred for outpatient treatment to a private psychological clinic in Farmville, Virginia, at different times within a 5-year period. Thirty families represented blue-collar socioeconomic levels and seven families represented White-collar professional levels. Single parents represented three families. Parents were informed in writing about all aspects of treatment and the reasons for stopping medication and all signed a consent form. Under the guidance of their family physician, medication was discontinued for all children enrolled.

This study was conducted as a single-case ABC alternating treatment design: baseline, cognitive, and CSP with a 1-year follow-up. A school intervention phase was added only for participants whose school performance and conduct failed to improve or generalize. Parents were seen each week throughout the study. The children attended during the initial evaluation, the cognitive phases, and the final session.

### Pre-CSP Assessment

Only the parents were seen for the initial appointment to obtain a background history. A second session was devoted to a 1-hour interview with the child. Assessment for DSM-IV ADHD behaviors was based on the interview with the parents, the interview with the child, and the behavioral checklist from the parent interview to rate the DSM-IV criteria. The checklist was also used at the last treatment session and at the 1-year follow-up contact. Parents provided any previous psychological evaluations and national test score profiles. This information was used to screen out (for participation in this study) any children with lower than normal range IQ scores or with any learning disabilities. Of course, intervention with these children and their parents was still provided, as well as for those children who did not meet DSM-IV criteria for ADHD. Parents were instructed how to observe, evaluate, and record the following target behaviors during a 4-week period:

**Active Manipulations.** These included (1) not doing as told, i.e., noncompliance, (2) defying commands, e.g., oppositionalism, and (3) temper tantrums, i.e., from mild foot stomping and door slamming to more severe screaming, yelling, and pounding.

**Verbal Manipulations.** These included (4) "Poor Me" statements, (5) negative statements, (6) nagging, (7) interrupting in personal or telephone conversations, (8) physical complaints that the parents judged not to be genuinely medical.

**Inattentive Behaviors.** These included (9) not paying attention (e.g., nonvisual attention, eyes not on the task or the speaker), nonauditory attention (e.g., failing to answer correctly, "What did I just say?"), and forgetting (e.g., failure to correctly answer, "What are you supposed to be doing?").

**Interactive Problems.** These included (10) impatience (e.g., markedly rushing ahead of parents when going somewhere, pushing a cart into people when in line, stepping in front of people, (11) aggression (e.g., hitting someone or

throwing an object at someone), (12) relatively severe forms of sibling fights (e.g., yelling or cursing at each other, excluding minor squabbles).

**School Performance Problems.** (13) This consisted of school subjects for which teachers rated class performance, conduct, and homework assigned. Grades were based on Class Performance being rated as A, B, C, D, F; Conduct being rated as E, S, N, U; and Homework rated as E, S, N, U. Criterion level was set for Class Performance at no grade being reported as a D or F; for Conduct at no grade being reported as an N or U; and for Homework at no grade being reported as an N or U.

It took two sessions to carefully explain each of these behaviors to parents. Recording sheets were provided listing the target behaviors with room for tally marks. Both parents were to record daily occurrences separately and only when both parents were at home. The three single parents were not counted in calculations of interparent reliability. Observations were recorded daily. At each weekly session the therapist reviewed and monitored the parent's observation checklists with them.

**Cognitive Treatment.** A 4-week cognitive treatment phase followed the baseline. The child was seen individually for cognitive focused therapy of "stop-think-and do" involving: identifying "trigger" situations, thinking of solutions, discussions and role playing, and encouragement.

In separate sessions during this phase parents were also seen, and instructed in the parenting skills, as outlined in Stein's (1999) book. These included social reinforcement techniques, activity reinforcement techniques, and time-out. The parents were instructed to avoid implementing any CSP strategy until their training was completed. Specific CSP techniques were designed for parenting ADHD children in requiring them "to think." These techniques included:

- (1) No children on medication.
- (2) Parents giving no warnings or counting before time-out.
- (3) Parents not bargaining or backing down once a time-out command was issued.
- (4) Parents keeping interaction with a child prior to time-out to a minimum, with the only sentence emitted by the parent being, "Go to time-out."
- (5) Children required to remember what they did wrong and if failing, being required to return to time-out (no more than three times).
- (6) Parents instructed not to tell the child why he or she was sent to time-out unless the child could not recall after the third time-out.
- (7) Children required to perform the correct behavior after time-out.
- (8) Children required to return to time-out if they did something inappropriate on the way to time-out.
- (9) Children never coached by their parents on correct behavior when going to a public place.
- (10) Parents using time-out in all settings (parents were trained in the use of this for all variety of settings).
- (11) Parents not permitting testing, preparatory, or anticipatory behaviors. At the slightest sign of an inappropriate behavior, time-out was enforced by the parents. Parental intervention was to occur early in the

behavioral sequence, even at the anticipatory or preparatory component of any target behavior.

(12) Parents immediately and consistently reinforcing (with praise and/or other social interaction) all correctly performed target behaviors in all settings.

(13) Parents posting no rules.

(14) The child's disruptive behaviors were brought under control at home before initiating school intervention.

(15) Parents and tutors not permitted to sit with the child during homework, but serving as only resource when help was requested by the child.

(16) Children not assigned to smaller classes for "special needs."

(17) All target behaviors comprehensively and simultaneously managed by parent.

(18) No use of material reinforcers and incentives or token economy programs.

It typically required six 1-hour sessions to train the parents to identify target behaviors, social reinforcement skills, and time-out, and to incorporate all the requirements listed above. Both parents were required to take separate notes, with the therapist monitoring their note taking. If parents seemed to not understand a concept, the therapist clarified and discussed it. Parents were regularly asked to summarize what they had learned and any misconceptions were also clarified.

**Implementing the CSP.** Once training was completed the parents were to give a brief explanation to their child on the day before implementing the program and then to review the explanation the next day. After that it was never to be repeated.

Parents were forewarned to expect that target behaviors would get worse in the beginning of the program (a "behavioral burst") and that new misbehaviors were quite possible. If these occurred, they were also to be targeted. The parents were to continue observational recordings separately and bring the results with them to their weekly sessions. At each session a careful analysis was made with the parents in the application of the CSP and corrections were made for any shortcomings or mistakes. This phase continued for 4 weeks, without the children being seen for any office visits. Particular emphasis was placed on the children remembering and attending to their behaviors completely on their own. By requiring the children to perform and recall the contingencies, the cognitive components of attending and thinking were assumed to develop as behaviors improved.

**School-Focused Treatment.** In this next phase, behavioral intervention was extended only for cases where school performance did not improve during the previous intervention. Failure to meet criterion in even one grade meant consequences at home. Where generalization from home to school was successful, office visits with parents ended but they, too, continued to collect the daily report cards.

In school intervention, a rigorous control of after-school activities was enforced contingent on the results of the daily report card. Again, enforcement was solely in the hands of the parents and not school officials. The children were not to know the contents of the report card until they got home. The report card was

delivered by the children in sealed envelopes. If they lost it, the parents called the teachers for the results. If all criteria were successful the child was reinforced with after-school free play or an organized activity such as sports for 2 hours each day. If one grade fell below criterion, then the child was not permitted any activity until after dinner. No substitute activities were permitted. If found doing something not permitted, the remainder of the time was spent in time-out. During this restricted time period, doing homework or reading was also not permitted. Doing homework during this scheduled time freed up activity time later. Each day a fresh start was available to the child. This phase required the parents to continue weekly office visits for 4 additional weeks.

**Post Therapy.** After formal office visits ceased parents were instructed to continue enforcing all contingencies. At the last session the DSM-IV behavioral checklist was readministered by the therapist. Parents were asked to participate in data collection for 2 weeks beginning 1 year after their final session. They would be contacted by telephone at that time. All parents agreed to do this.

**Follow-Up.** One year after the final session parents were contacted by phone and were asked to give a brief qualitative report and to collect observations for 2 weeks and mail in the results. At the final contact, the therapist conducted a telephone assessment of the DSM-IV checklist.

## RESULTS

Figures 1 through 4 show average frequencies per week for 13 target behaviors through the phases of baseline, outpatient cognitive therapy, CSP, and 1-year follow-up. Inter-parent observational reliabilities estimated by Pearson correlation coefficient ranged from .79 to .98.

None of the target behaviors showed any appreciable response to cognitive therapy. However, after parents had completed training, the implementation of CSP appears to have had a considerable effect. During the first week of observations seven of the target behaviors showed slight frequency increases. In the following 3 weeks the frequencies of 12 of the 13 target behaviors show a consistent and marked decline. By week 12, frequencies were quite low compared to baseline. Boys and girls responded to the CSP in consistent and uniform ways. No difference was noted between single- and two-parent families. All children showed the full changes of those behaviors targeted at home. Only aggression appeared to show no appreciable change throughout the entire period. Of importance is the decline of the three inattentive component behaviors: visual inattention, auditory inattention, and forgetting.

A similar pattern was evident for school performance. Failing grades for the three general measures showed no decline during the weeks of cognitive therapy but a marked decline during parent management for home behaviors in 81% of the children. The remaining 19% showed minimal changes in school performance. The school program with activity loss based on the daily report card for these seven children appeared to produce considerable improvement. Thus, all 37 children finally demonstrated substantial, if not complete, improvement both

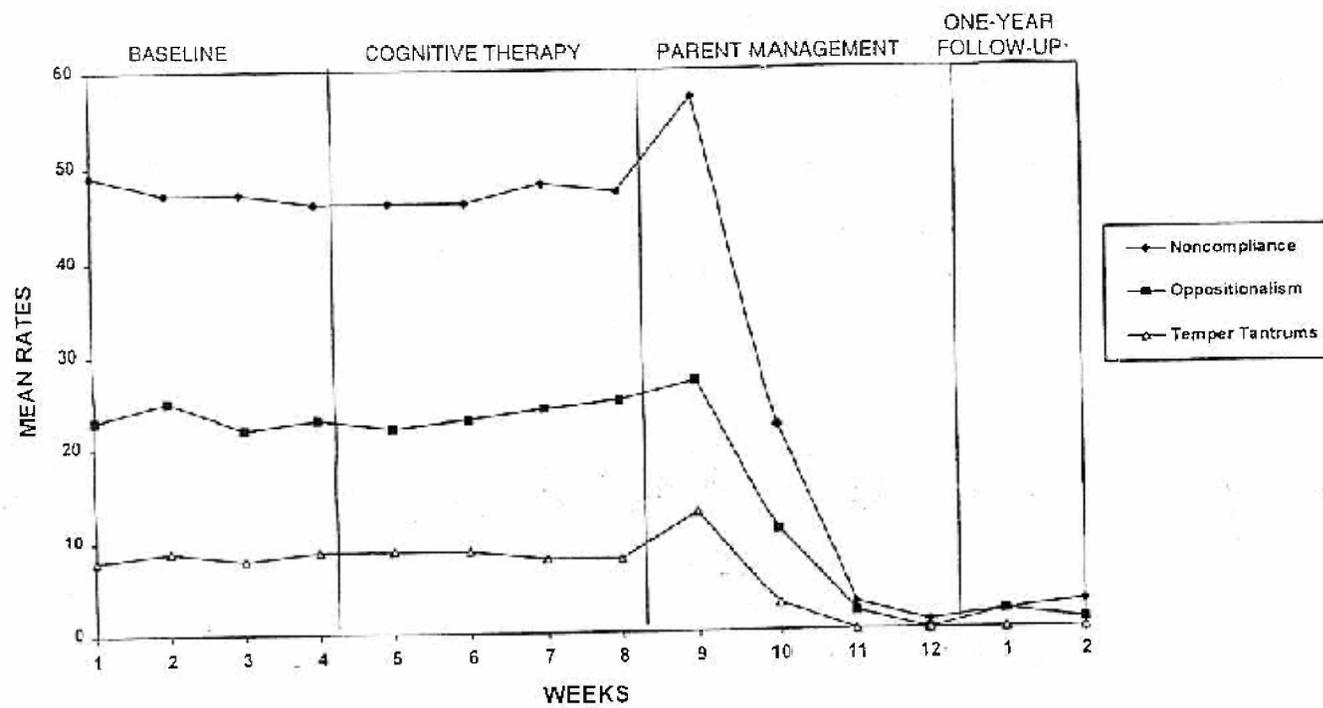


Figure 1. Mean rates per week for active manipulations.

D. B. Stein

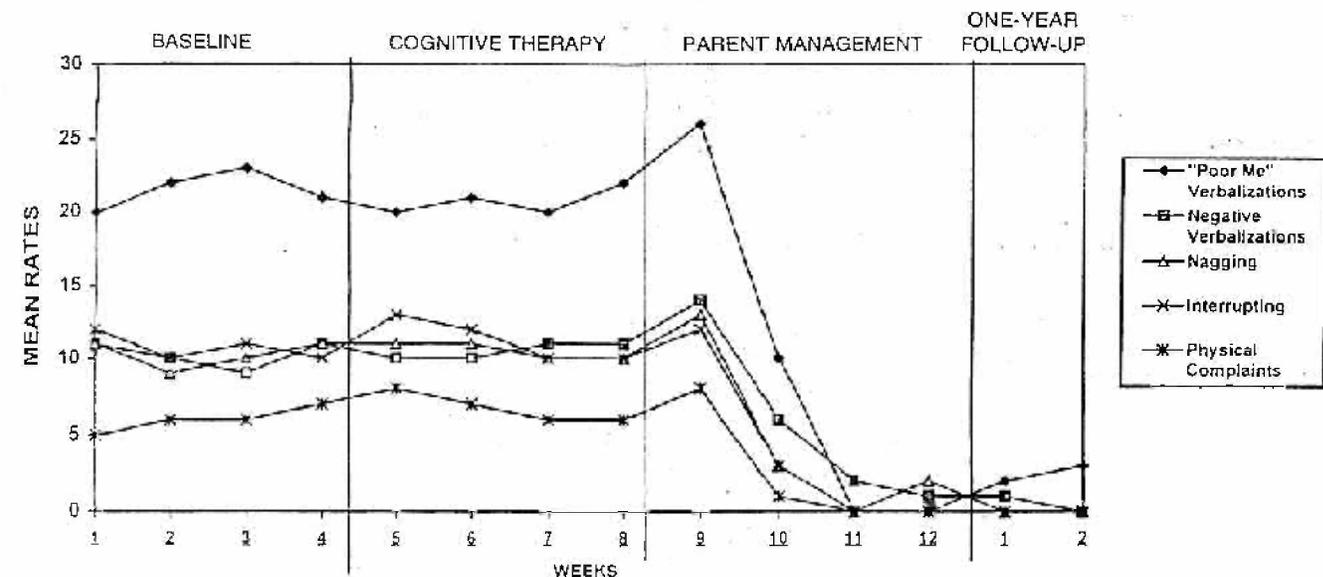


Figure 2. Mean rates per week for verbal manipulations.

A. B. Stein et al. / Journal of Abnormal Child Psychology 31:1-11, 2003.

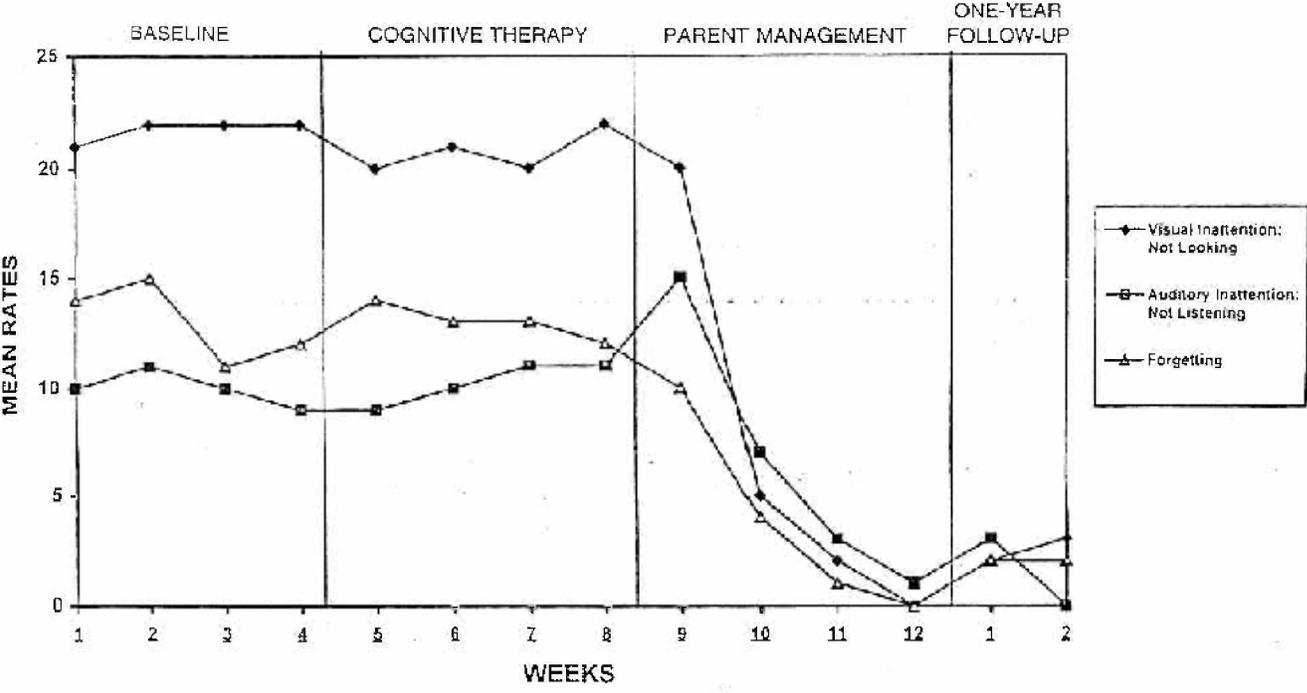


Figure 3. Mean rates per week for inattentive behavior.

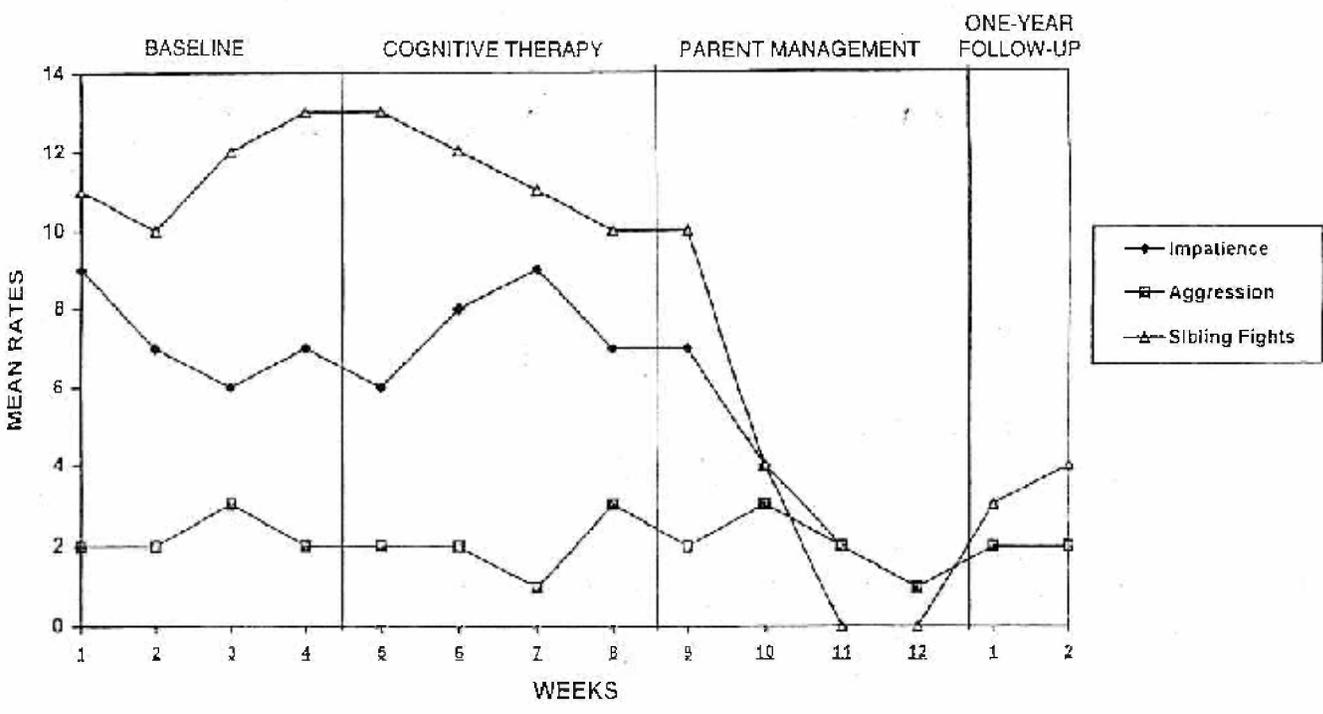


Figure 4. Mean rates per week for interactive problems.

at home and at school. At the last session, none of the children met the criteria of the DSM-IV checklist.

Thirty-four of the 37 families were located for the 1-year follow-up. Of the parents contacted, each cooperated with the 2 weeks of observation and reviewed the DSM-IV checklist. One-year follow-up indicates that improvements remained stable. Again, at follow-up, the DSM-IV checklist confirmed that not a single child qualified for an ADHD diagnosis.

DISCUSSION

This study supports the hypothesis that the parent training called the Caregivers Skills Program (CSP) can effectively manage children's behaviors associated with ADD/ADHD. Barkley (1995), and Parker (1994) and have stated that behavior therapy and parent training do not produce good results unless stimulant medications are added. This study was conducted without medication and suggests that all participants substantially benefited from the parent behavioral management program. The results show that 11 out of 12 targeted behaviors considerably improved to either few or no occurrences while only aggressive behavior did not respond (a 92% improvement rate). Since aggression is a low-frequency behavior, training trials were considerably reduced. Pilot studies currently under way show promise for adding a response cost program to reduce aggression.

Carison, Pelham, Milick, and Dixon (1992) indicate that behavioral intervention in the home produces little or no generalization effects into the school setting. The results of the present study indicate an 81% generalization rate before any formal school intervention was made. With the addition of the Daily Report Card Program to facilitate communication between teacher and parent(s) and with the parent(s) carrying out contingencies at home, the success rate improved to 100%. Thus, all 37 children improved to passing grade levels for class participation, conduct, test, and homework grades.

In currently popular parent training approaches it is recommended that the parents sit with the ADD/ADHD children while doing homework and guide them (Barkley, 1995; Parker, 1994; Wright, 1997). Our findings show homework improvements with the parents not sitting with their child and only serving as a resource. This suggests that with proper contingencies these children can function autonomously.

Kendall (1996) has indicated that the key cognitive feature of ADD/ADHD children is that they "do not think," and Braswell and Bloomquist (1991) admitted that cognitive-behavioral-based parent management training for ADD/ADHD has had only mild to moderate success. Results presented here suggest that with proper contingencies, these children can monitor and moderate their behaviors. Improvement would be unlikely, if not impossible, unless the children were actively recalling and mediating the possible contingencies. However, cognitive changes can only be inferred since no direct assessment of cognitive patterns was undertaken. More research into actual cognitive functioning is needed.

Cognitive office-based therapy alone has also not met with much success with ADD/ADHD children (Kendall, 1996; Kendall & Braswell, 1993). The present

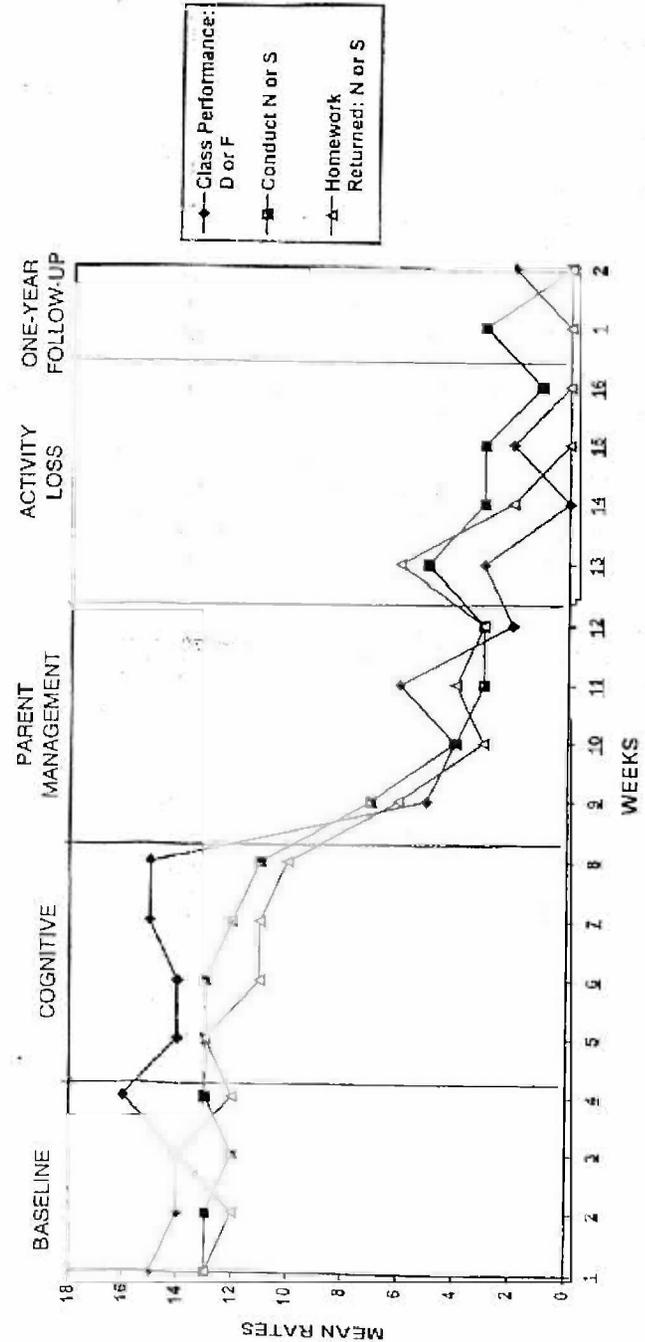


Figure 5. Mean rates per week for school performance grades below criterion level.

results during the cognitive therapy (Petersen, 1992) phase support a similar conclusion.

Dupaul (1998) indicated that parental compliance in parental training programs is usually only poor to moderate. The results of this study did not support that claim. All participants benefited from the parent training and cooperation was 100%. Dupaul also indicated that parents' ability to code behaviors was uniformly poor. This was not supported by the high degree of rater reliability observed in this study. In addition, questions sometimes arise about the ability of single parents to effectively carry out intervention. While the three single parents in this study did so successfully, a much larger study is needed to investigate the efficacy of this form of parent training with single parents.

Barkley (1995) has stated that parent training does not work well without stimulant medication. Whalen and Henker (1991) also review that if the medication is stopped, any gains made decline rapidly. In this study gains were maintained without any medication and after a 1-year follow-up, appeared to be well sustained and stabilized. Perhaps the fact that current parent training models focus heavily on preceding stimuli that require extensive cueing, prompting, reminding, coaxing, and warning reduces a child's self-control and therefore increases the reliance of children on drugs in order to maintain behavioral gains and controls. This contribution to cognitive dependency could perhaps explain why all gains decline when the medication is ceased (Stein, 1999). Also, these approaches do not generalize well into schools where children receive less individual attention. This study focuses instead on consequent stimuli or contingency management and indicates that this change produces stable cognitive and behavioral improvements that also remained stable after 1 year of follow-up.

Other parent training approaches may have additional reasons for their reportedly low success rates. Giving warnings prior to time out (Phalen, 1984) involves interacting with the child at the time of a misbehavior and may therefore inadvertently be reinforcing the misbehavior (Franks, 1969). This may be especially problematic for reinforcing inappropriate subvocal or verbal patterns (Greenspoon, 1955) such as "poor me statements" or "negative verbalizations." Petersen's (1992) cognitive/behavioral approach for prompting may also reinforce undesired behaviors because such prompting may be conducted while the child is beginning to misbehave. Additional research on this issue would be helpful. Several parenting programs also recommend sometimes ignoring certain children's problematic behaviors while disciplining them at other times (Barkley, 1995; Hallowell & Roney, 1994; Parker, 1994; Reichenberg, Ullman, & Ullman, 1996). This inconsistency may be placing several behaviors on intermittent reinforcement schedules, which then may contribute to these behaviors becoming increasingly resistant to extinction.

These various weaknesses in operant techniques were considerably reduced in the CSP, which may explain its apparent effectiveness.

Several limits to this study may be identified. First, this study was conducted without medication. Therefore no meaningful statement about the CSP being a true alternative to drugs can be made without further controlled studies. This study is only suggestive of the efficacy of CSP, because it was conducted as a

single-case experimental design. In addition, even if the study was conducted under "real world" conditions, this design would be more meaningful if return to baseline were conducted after each phase (Barlow & Hersen, 1988). Perhaps briefer baseline periods of 2 weeks instead of 4 would relieve some of the concerns over possible denial of success claims by managed care organizations and therefore, would allow a return to baseline.

Second, since this study made sweeping global changes in typical parent management training, it cannot be determined precisely which elements or combination of elements of CSP were essential for effecting the changes in the children.

Third, Dupaul (1998) criticized the selection of subjects by solely using a DSM-IV checklist. Subject selection would perhaps have been enhanced by adding assessment tools such as the Achenbach and Connors rating scales (Overton, 1996). However, these scales only approximate the DSM-IV criteria, and have not proved to enhance diagnostic accuracy (Stein, 1999). Further research on assessment would help clarify this issue.

Fourth, with the study being conducted by only one therapist, the results could be interpreted as a consequence of the personality of the therapist (Dupaul, 1998). This legitimate concern may only be clarified by conducting controlled studies with random assignments to several therapists.

Fifth, this study only suggests a limited rebuttal to the disease model of ADD/ADHD (Barkley, 1995) since these children improved with only behavioral treatment and no longer qualified for DSM-IV criteria 1 year later. Without proper controls, however, no formal conclusion about the nature of ADHD behavior is legitimate. Future carefully controlled studies will be needed.

Current medically based treatments reinforce children's beliefs that they have a semipermanent disease (Breggin, 1998). However, Seligman (1994) believes that diagnostic terms are moving away from pejorative connotations. Stein (1999) has suggested modifying diagnostic terms from ADD to IA ("inattentive") and ADHD to HM ("highly misbehaving"), in the hope that such a change would reduce the disease connotation that the current terms have for both professionals and the public community.

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