Journal of Consulting and Clinical Psychology
1994, Vol. 62, No. 3, 583-593

0022-006X/94/$3.00

Advancing Videotape Parent Training: A Comparison Study

Carolyn Webster-Stratton

This study examines the specific effects of adding a broader based, videotape treatment component (ADVANCE) to a basic videotape parent skills training program (GDVM). ADVANCE treatment trains parents to cope with interpersonal distress through improved communication, problem solving, and self-control skills. Seventy-eight families with a child diagnosed as oppositional-defiant or conduct-disordered were randomly assigned to either GDVM alone or GDVM plus ADVANCE. Parent reports of child adjustment and parent distress, assessment of child's knowledge of social skills, as well as independent observations of mother–and father–child interactions and communication and of problem solving between parents were obtained at pre- and post-GDVM and at post-ADVANCE. Both groups significantly improved at short-term follow-up. ADVANCE produced additional significant improvements in parents' communication, problem-solving skills, and consumer satisfaction, as well as children's increased knowledge of prosocial solutions. The clinical significance of these findings is discussed.

In treatment programs that attempt to reduce conduct disorders among children, one of the major strategies has been parent skills training, typically thought of as a process whereby parents learn to alter the reinforcement contingencies that support the antisocial behavior of children. Several parent training programs have been extensively described (e.g., Patterson, Chamberlain, & Reid, 1982), and comprehensive evaluations have yielded promising results. Successful short-term treatment outcome has been verified by significant changes in parents' and children's behavior and in parental perceptions of child adjustment (e.g., Patterson & Fleischman, 1979; Webster-Stratton, 1984; Webster-Stratton, Kolpacoff, & Hollinsworth, 1989). Home observations have indicated that parents who undergo parent training are able to reduce children's levels of aggression by 20% to 60% (Patterson et al., 1982; Webster-Stratton, 1985b). Generalization of improvements from the clinic to the home over reasonable follow-up periods (1 to 4 years) has been demonstrated (e.g., Patterson & Fleischman, 1979; Webster-Stratton, 1984), as has generalization to untreated child behaviors (e.g., Webster-Stratton, 1990a).

Despite the overall success of these parent-training programs in producing statistically significant changes in parent and child behaviors, there is also evidence that some families do not respond to treatment. If the criterion for treatment response is the extent to which parents and teachers report children's adjustment within the nonclinical range of functioning (Jacobson, Follette, & Revenstorf, 1984), then the results of these interventions appear less robust. In long-term follow-up studies, 30% to 40% of treated parents have reported that their children have behavior problems in the clinical range, as have 25% to 50% of the children's teachers (Schmaling & Jacobson, 1987; Webster-Stratton, 1990a). Parent and family characteristics such as marital distress, spouse abuse, lack of a supportive partner, maternal depression, and high life stress are associated with treatment relapses and fewer treatment gains (e.g., Dadds, Schwartz, & Sanders, 1987; Webster-Stratton, 1985a, 1985b, 1989a, 1989b, 1990b; Webster-Stratton & Hammond, 1988, 1990). In addition, families with socioeconomic disadvantages and a lack of social support for the mother outside the home are less likely to maintain treatment effects (Wahler, 1980).

Moreover, the same factors that have been associated with treatment nonresponse or relapse have also been associated with the initial development of conduct disorders. For example, minor and major negative life stress is twice as high in clinic families with conduct-disordered children as in nonclinic families (Whipple & Webster-Stratton, 1991). Clinic mothers of conduct-problem children also report higher levels of depressive symptoms than do mothers of nonclinic children (Griest, Forehand, Wells, & McMahon, 1980). In addition, clinic parents who seek help for their children's behavior problems commonly present high levels of marital stress and conflict. In my own studies of over 400 families with young oppositional and conduct-problem children, 75% of the parents reported having been divorced at least once or described their marriage as highly distressed. Half of the married couples reported experiences of spouse abuse (Webster-Stratton, 1990b). A considerable number of other researchers have also reported that marital distress, negative parental affect, disagreements over child rearing, and ineffective marital communication are associated with children's behavior disturbances (e.g., Grych & Fincham, 1990;

This research was supported by the National Institutes of Health National Center for Nursing Research Grant 5 RO1 NR01075-08.

I am grateful to several people who assisted in extensive work related to data collection and data management: Kathy Rogers, Deborah Woolley Lindsay, Marcia King, Nat Houtz, Doris Harkness, and Margaret Trudeau. I extend special appreciation to Mary Hammond for her statistical assistance, to Diane Elliott for manuscript preparation, and to Deborah Woolley Lindsay for her review and feedback on this article. Finally, thanks to Terri Hollinsworth and Joyce Victor for their dedication to the integrity of the treatment.

Correspondence concerning this article should be addressed to Carolyn Webster-Stratton, Parenting Clinic, JD-03, School of Nursing, University of Washington, Seattle, Washington 98195.

Jouriles et al., 1991). These findings highlight the importance of parents' affect, communication, and conflict resolution skills as influences on children's conduct problems.

In light of this research, I hypothesized that, rather than a specific deficit in parenting skills per se, parents of conduct-disordered children have a more general "relational deficit" in communication, conflict resolution skills, and affect regulation. This relational deficit is reflected on several levels (e.g., marital, parental, interpersonal, and personal). In this model, one possible reason that typical parent-training programs fail to produce improvements in some families may be that their focus is too narrow; they do not alter parents' negative communication patterns, anger management difficulties, and poor problem-solving techniques, all of which are still being continuously modeled for their children at home. In other words, even if treated parents use more effective parenting skills, their children still learn negative, ineffective relational styles by directly observing their parents' interpersonal communication patterns and their responses to interpersonal stress.

Although studies investigating the potential contribution of adjuncts to parent training are few, those that have examined adjuncts have generally supported their short-term efficacy beyond basic parent training (e.g., Dadds et al., 1987; Griest et al., 1982). However, these adjuncts have usually involved individual therapy, making them costly and inefficient, and the studies have been limited by small sample size, reliance on self-report data, and nonspecific measures for evaluating the effectiveness of the adjuncts.

The purpose of this study was to evaluate whether a broader based treatment component (ADVANCE)—using videotape modeling plus therapist-led discussion to improve family communication, problem solving, and coping skills—would add to the effectiveness of the basic parent skills GDVM treatment for parents of conduct-disordered children. ADVANCE was developed after an analysis of 218 families who had received the GDVM parent training revealed that the most powerful predictors of child deviance at long-term follow-up were marital distress and lack of a supportive partner. It was hypothesized that families who received ADVANCE would show improved communication and problem-solving skills, as well as fewer child behavior problems, when compared with families who received GDVM only. This study extends beyond previous evaluations of adjuncts by (a) including detailed multimodal assessments of the particular communication and conflict resolution skills taught in ADVANCE and (b) evaluating whether adjuncts designed to address interpersonal (apart from parenting) issues are suitable to the more cost-effective group videotape format.

Method

Subjects

Criteria for study entry required that (a) the child be between 3 and 8 years of age; (b) the child have no debilitating physical impairment, intellectual deficit, or history of psychosis and receive no treatment at the time of referral; (c) the primary referral problem be child misconduct that has been occurring for more than 6 months (e.g., noncompliance, aggression, oppositional behaviors); (d) parents rate their child as having a clinically significant number of behavior problems according to the Eyberg Child Behavior Inventory (ECBI; Robinson, Eyberg, & Ross, 1980); and (e) the child meet the criteria of the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.; *DSM-III-R;* American Psychiatric Association, 1987) for oppositional defiant disorders (ODD), conduct disorders (CD), or both.

Eighty-five families originally entered the study. Six of these families, including 6 mothers and 3 fathers, did not complete the basic treatment (GDVM), attending only one to two sessions. In addition, one couple who was assigned to the advanced treatment condition attended only four of the advanced treatment sessions. Differences between these 7 families who did not complete treatment and the 78 families retained in the study were examined on pretreatment variables. There were no significant between-group differences on any of the child variables including age, sex, parent-reported behavior problems (as measured by the ECBI), or observed noncompliant and deviant behaviors. In addition, there were no significant differences on the psychological variables or on educational, occupational, or marital status.

The 78 families who completed all phases of the treatment program were either self-referred (50.0%) or professionally referred (50.0%). Study children included 58 (74.4%) boys and 20 (25.5%) girls, with a mean age of 58.72 months (SD = 12.91). Seventy-three (93.6%) children were living with one or both biological parents, and 5 children (6.4%) were living with one or both adoptive parents. The mean number of pretreatment behavior problems according to the ECBI was 21.21 (SD = 5.46), indicating that the children were in the clinic range according to Robinson et al. (1980); for nonclinic range, M = 6.8, SD = 3.9. Home observations before treatment confirmed the ECBI results, with the children exhibiting noncompliant and deviant behaviors at a mean rate of 18.34 (SD = 15.46)—one negative behavior every 2 min.

Study parents included 77 mothers (5 of them adoptive) and 58 fathers. Of these, 54 (69.2%) were married or partnered, and 24 (30.8%) were single. The mean age was 34.70 years for mothers, and 36.57 years for fathers. Median yearly income was approximately $35,000, with 10 families (12.8%) at welfare level, 22 families (28.2%) earning $9,000–$29,000, and 46 families (59.0%) with yearly incomes of $29,000 or more. Interviews indicated that 27 (33.8%) mothers had experienced spouse abuse. Thirty-five (44.9%) families reported alcoholism or drug abuse in the immediate family, and 51 (65.4%) reported alcoholism or drug abuse in the extended family. Eleven (14.3%) mothers reported that they were abused as children. Twenty-four (31.2%) mothers and 13 (22.4%) fathers reported mild-to-moderate depression, scoring 10 or higher on the Beck Depression Inventory (BDI; Beck, 1972).

Measures

The following widely used measures of parent distress were used: the Marital Adjustment Test (MAT; Locke & Wallace, 1959), the Brief Anger Aggression Questionnaire (BAAQ; Maiuro, Vitaliano, & Cohn, 1987), the BDI (Beck, 1972), and the Parenting Stress Index (PSI; Abidin, 1983). Parent perceptions of child adjustment were measured by the widely used parent form of the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1991) and the equally proven ECBI (Robinson et al., 1980). On the PSI, only the Parent Domain score was used; on the ECBI, only the Total Problem score was used.

For home observations, the Dyadic Parent–Child Interaction Coding System (DPICS) (Robinson & Eyberg, 1981), consisting of 29 behavior categories, was used. Three summary variables were formed for parent behaviors: praise, nonintrusive descriptive statements, and critical statements. For the target child, there was one variable: total child deviance (frequency of whining + crying + physical negative behavior + smart talk + yelling + destructive behavior + noncompliance). For each assessment, each parent–child dyad was observed for 30 min on two separate visits. An attempt was made to impose as little structure as

possible: Family members were told to "do what you would normally do" but to not talk to the observers, watch television, or talk on the telephone. The extensively trained observers were unaware of the hypotheses of the study. To assess reliability, a second observer was present for at least 30% of all home observations. Mean overall interrater reliability (based on occurrence agreements for each 5-min segment) was 82% (range, 72%–95%). For the mother behavior categories, the product-moment correlations calculated between observers ranged from .80 to .90; for the child behavior dimension, the correlation was .80.

The Problem-Solving-Interaction Communication-Affect Rating-Engagement System (PS-I CARE) was developed (Webster-Stratton, King, & Hollinsworth, 1991) to record problem-solving skills, communication strategies, affect dimensions, and marital collaboration or engagement. This coding system includes 23 behaviors grouped into the following categories: total problem-solving skills; problem definition (agreement about problem); solution generating (number of solutions); and evaluation, agreement, and planning about solutions. In addition, coders rated couples' problem solving techniques on a 5-point "collaboration" scale ranging from *low collaboration* (abrasive, dismissive, stonewalling; 1) to *high collaboration* (cooperative, mutually reinforcing, joint ownership of problem; 5). The Communication and Affect Coding System included 20 communication skills leading to two summary scores, one for positive communication strategies (e.g., validation, compromise, praise, open-ended questions, positive requests, humor) and one for negative communication (e.g., complaining, ignoring, coercion, moralization, blame, escalation, withdrawal).

Couples were asked to choose two problems to discuss for 15 min while being videotaped. These problem-solving discussions were coded by means of PS-I CARE. The six extensively trained coders were unaware of the hypotheses of the study. Over 50% of the videotapes were independently coded by a second coder to establish interrater reliability. Mean overall interrater reliability (based on occurrence agreements) was 83% (range, 70% to 100%). The product-moment correlations calculated between coders ranged from .96 (positive communication) to .71 (making plans).

The Child Social Problem-Solving Test–Revised (SPST-R; Rubin & Krasnor, 1983) is derived from Spivak and Shure's (1974) Preschool Problem-Solving Test. The child is presented with pictures of problem situations and then is asked what the story character could do or say to accomplish the desired goal. For each situation, two responses are requested and answers are scored on the basis of number and type of solutions offered (prosocial, antagonistic, authority, trade, bribe, and manipulate). Prosocial solutions included 10 categories (e.g., ask, wait), and antagonistic solutions included 8 categories (e.g., attack, avoid, bribe). I was interested in the total number of solutions proposed and whether they were prosocial or antagonistic. The validity of SPST-R has been established by showing that conduct-problem and rejected children use more aggressive strategies and, in the face of failure, are less flexible in finding alternative strategies. Interrater reliability for coding responses has been reported at 85%.

The Consumer Satisfaction Questionnaire consisted of 35 items, with a 7-point Likert scale response format. Parents responded to statements on a scale ranging from *extremely useless* or *difficult* (1) to *extremely useful* or *easy* (7).

Procedures

All families (mothers and fathers) were assessed on the aforementioned measures before the basic GDVM treatment. The 77 mothers attended an average of 10.71 GDVM sessions (SD = 1.58), and the 58 fathers attended an average of 10.02 GDVM sessions (SD = 1.29). Immediately post-GDVM, all families were reassessed on the same measures. Thirty-nine families were randomly assigned to no further treatment, and 38 families were assigned to the ADVANCE program. Immediately after the ADVANCE treatment, both groups were then reassessed. The number of assessment contacts was kept constant across the two conditions.

Treatment

GDVM training. All parents attended the basic GDVM training program, coming to the clinic weekly for 12 to 13 2-hr sessions. Each week, groups of 10 to 15 parents met with a therapist to view the series of 10 videotape programs of modeled parenting skills (approximately 250 vignettes and 25 min of videotape per program). After presenting each 2-min parent–child vignette, the therapist led a focused discussion of the important interactions and encouraged parents' ideas and problem solving. Topics covered play skills, praise and rewards, limit setting, and handling misbehavior. A more complete description of the videotape training programs and conceptual bases is available (Webster-Stratton, 1993).

Of the 39 families who received only the GDVM treatment, 29 (72.5%) attended as partners, 10 (25.0%) attended as mother only, and one (2.5%) as father only. The 39 mothers attended an average of 10.59 basic sessions (SD = 1.25), and the 30 fathers attended an average of 9.93 basic sessions (SD = 1.26).

GDVM plus ADVANCE. The parents (38 mothers, 28 fathers) randomly assigned to the ADVANCE condition came to the clinic weekly for 14 additional 2-hr sessions. The design of ADVANCE was parallel to GDVM in theory and in format: a cognitive social learning treatment with therapist-led group discussion. The six videotape programs (over 60 vignettes) cover the following content areas.

(a) Personal self-control: how to cope with anger, depression, and stress. This therapy component builds on the well-established research and clinical writings of Beck (1972), Lewinsohn, Antonuccio, Steinmetz (1984) and Meichenbaum (1977).

(b) Communication skills: destructive styles of communication, effective communication skills, and ways to give and get support (e.g., active listening and expressive speaking skills). This component builds on the communication work of Gottman, Notarius, Gonso, and Markman (1976) and the social-learning-based marital treatment developed by Jacobson and Margolin (1979).

(c) Problem-solving skills between adults: methods and a particular structure for solving problems with spouses, employers, extended family members or children. Building on the research by D'Zurilla and Nezu (1982), these sessions attempt to promote parents' sense of self-efficacy in terms of handling conflicts.

(d) Teaching children to problem solve: how to teach children to solve problems, following the work of Spivak and Shure (1974).

(e) Strengthening social support and self-care: This concept was woven throughout all the sessions by encouraging the group members to help each other.

Of the 38 families participating in the ADVANCE group, 28 (73.7%) consisted of two parents and 10 (26.3%) were single parents. The 38 mothers attended an average of 12.05 sessions (SD = 2.75), and the 28 fathers attended an average of 11.12 sessions (SD = 2.89). Only 1 of the 39 families who were originally randomly assigned to ADVANCE dropped out.

Therapists and treatment integrity. The therapists were two social workers and two psychologists. All four had extensive previous clinical experience (10-20 years) with children with behavior problems. To assure treatment integrity, therapists followed a comprehensive 400-page treatment manual that included the rationale for each group therapy session, a description of each videotape vignette accompanied by an interpretation and questions for group discussion, rehearsal exercises, homework assignments, and parent handouts. To control for any treat-

ment effects, each therapist had an equal number of GDVM and ADVANCE treatment groups. Over half of the sessions were conducted with a second therapist who monitored the treatment to ensure that the manual instructions and treatment protocol were followed. All sessions were videotaped, and over half were peer reviewed.

Results

Treatment effects were evaluated with mother and father reports of children's adjustment (ECBI, CBCL); by observations of mother's and father's behavior with their children (praise and criticisms); by observations of child behavior (total deviance and noncompliance); by parent reports of personal distress (MAT, BAAQ, BDI, PSI); by observations of marital communication and problem solving (PS-I CARE); by child problem solving (SPST-R) and by parent consumer satisfaction. Analysis initially consisted of repeated measures multivariate analyses of variance (MANOVAs) for each of the five sets of dependent variables. In the MANOVA, one between-group factor (two treatment groups, ADVANCE and GDVM) and one within-group factor with three levels (time, pre-GDVM, post-GDVM, and short-term follow-up) were used to determine group, time, and interaction effects for the sets of variables. MANOVAs were followed by analyses of variance (ANOVAs) when there was a significant Group × Time interaction. These were followed by paired t tests to describe changes over time in each group separately. However, for two of the measures, MANOVA consisted of only two levels of time. Marital interactions were assessed after both groups finished the basic GDVM intervention and then again at short-term follow-up or post-ADVANCE. The child problem-solving testing was assessed at baseline and at short-term follow-up.

The ADVANCE and GDVM-only groups were examined for differences on pretreatment variables. No significant differences were found on any of the child variables including age, sex, parent-reported behavior problems, or observed parent–child interactions, nor were there any significant differences between the two groups on any of the parent demographic or psychological variables.

The two groups were again compared post-GDVM. There were no significant differences between the two groups in terms of number of GDVM sessions attended or on any of the parent report variables or parent–child observational variables after the basic parent training program. In addition, MANOVA indicated no significant group differences post-GDVM between mothers and fathers for the PS-I CARE collaboration, communication, and problem-solving variables.

Mother and Father Reports of Child Adjustment

Repeated measures MANOVA revealed significant time effects for the set of mother and father reports of child adjustment (CBCL and ECBI), $F(6, 49) = 35.47$, $p < .001$, and $F(6, 36) = 17.50$, $p < .001$, respectively. No significant main group effects and no interaction of time and group effects were found for the set of report variables, indicating that both treatment groups changed in generally the same ways. Both treatment groups had significant ($p < .001$) reductions in mother and father reports of ECBI and CBCL behavior problems immediately post-GDVM; ECBI problems continued to decrease at short-term follow-up (i.e., both groups). Both fathers and mothers reported significant increases in CBCL social competence immediately post-GDVM which were maintained for both groups at short-term follow-up. The mean scores and standard deviations for the mother and father report variables are presented in Table 1.

Mother and Father Reports of Distress

A repeated measures MANOVA revealed significant time effects for the set of mother and father distress measures (BDI, BAAQ, and PSI), $F(6, 55) = 17.43$, $p < .001$, and $F(6, 38) = 3.17$, $p < .01$, respectively. No significant main group effects and no interaction of time and group effects were found for the variables. In a comparison of pre- and post-GDVM reports, both treatment groups of mothers and fathers reported significantly fewer ($p < .05$) symptoms of depression and significantly less ($p < .001$) parent stress. Mothers in both groups also reported significantly less anger immediately post-GDVM ($p < .05$). At short-term follow-up, these changes remained stable for both groups (see Table 1).

Home Observations of Mother–Child and Father–Child Interactions

A repeated measures MANOVA revealed significant time effects for the set of mother and father behavior variables (criticisms, reflectives-descriptives, and praise), $F(6, 69) = 11.65$, $p < .001$, and $F(6, 50) = 9.88$, $p < .001$, respectively, and for the child behavior variable (child noncompliance plus deviance), $F(2, 73) = 11.22$, $p < .001$, and $F(2, 54) = 17.44$, $p < .001$, respectively. No significant main group effects and no interaction effects for the parent–child observations were found, again indicating that both groups changed in the same ways. Home observations of mothers and fathers indicated a significant ($p < .001$) reduction in critical statements (50% fewer) and a significant ($p < .001$) increase in praise and reflective statements (50% more) immediately post-GDVM for both groups, results that remained stable for both groups at short-term follow-up. Home observations also indicated a significant ($p < .001$) reduction in child noncompliance and child deviance immediately post-GDVM, which remained true for both groups at short-term follow-up (see Table 2).

Mother–Father Communication and Problem Solving

A repeated measures MANOVA was performed for the set of PS-I CARE summary variables, including the problem-solving total, collaboration, and the ratio of positive to negative communication, for examination of the overall effects of group, time (post-GDVM and short-term follow-up), and interaction. Significant Group × Time interaction effects were found for the set of mother variables, $F(3, 42) = 5.31$, $p < .003$, and for the set of father variables, $F(3, 42) = 10.28$, $p < .001$, suggesting that mothers' and fathers' communication and problem-solving skills varied as a function of treatment group. Analysis of the interaction effects for individual variables indicated that

Table 1
Mother and Father Reports of Child Adjustment and Distress by Treatment Group and Time

	GDVM only						GDVM + ADVANCE					
	Pretreatment		Post-GDVM		Short-term follow-up		Pre-treatment		Post-GDVM		Short-term follow-up	
Measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
						Parent report of child adjustment						
Mother												
CBCL												
Behavior problems	64.09	8.55	57.82	9.60	55.94	8.69	66.21	8.97	58.58	10.12	57.48	11.05
Social competence	38.00	12.58	43.06	13.54	40.42	10.76	38.48	10.28	45.40	14.47	45.76	10.73
ECBI problem score	21.26	5.65	12.46	6.45	10.54	7.14	21.16	5.34	12.16	5.88	8.74	6.37
Father												
CBCL												
Behavior problems	61.54	9.45	56.36	8.96	55.46	8.66	64.41	7.89	55.26	9.44	56.57	55.45
Social competence	37.55	13.10	39.55	9.47	39.59	12.81	39.41	10.93	45.27	11.14	47.27	10.69
ECBI problem score	15.55	7.71	9.52	5.94	6.79	4.82	17.04	7.02	10.08	7.95	9.23	7.10
						Parent distress measures						
Mother												
Marital adjustment	104.52	15.28	104.22	14.93	106.15	14.14	103.65	16.25	106.62	20.12	103.50	17.09
Depression	8.21	6.26	6.97	6.69	6.28	5.53	7.84	5.15	5.61	6.21	5.76	7.75
Anger	8.09	3.30	7.18	2.80	7.39	2.95	8.23	3.65	7.87	3.29	7.67	3.92
PSI parent domain	147.72	26.07	138.95	28.51	132.85	24.21	144.51	24.48	126.54	26.17	126.94	31.71
Father												
Marital adjustment	103.22	15.00	104.78	16.48	104.41	12.46	104.36	13.95	105.00	14.43	107.76	14.93
Depression	5.38	4.68	3.79	4.47	3.17	4.00	5.42	5.12	4.50	5.28	4.58	5.61
Anger	6.83	2.88	6.87	2.74	6.71	2.39	7.09	2.27	7.05	2.73	6.64	2.50
PSI parent domain	136.93	29.18	128.79	25.88	127.62	21.95	131.46	18.93	123.27	21.52	121.19	20.68

Note. For the GDVM program only, $N = 39$ (69 mothers, 30 fathers). For GDVM + the ADVANCE component, $N = 64$ (37 mothers, 27 fathers). CBCL = Child Behavior Checklist. ECBI = Eyberg Child Behavior Checklist. PSI = Parenting Stress Index.

ADVANCE mothers and fathers showed the greatest improvements on most variables. Further analysis indicated that ADVANCE mothers significantly increased ($p < .001$) on problem solving, problem definition, number of solutions, agreement and planning, collaboration skills, and the ratio of positive to negative communications skills. On the other hand, GDVM-only mothers significantly decreased on problem solving, number of solutions, and collaboration; their ratio of positive to negative communication remained stable. ADVANCE fathers significantly increased on problem solving, agreement, planning, and the ratio of positive to negative communication. GDVM-only fathers significantly decreased on solution generating and collaboration, and they remained stable on the communication ratio.

Child Problem Solving

A repeated measures MANOVA for the social problem-solving variables (number of different prosocial and agonistic categories) indicated a significant Group × Time interaction, $F(2, 52) = 3.46$, $p < .04$, suggesting that children's problem solving varied as a function of treatment group. Univariate ANOVAs showed a significant Group × Time interaction for different prosocial categories, $F(1, 53) = 6.83$, $p < .02$, but not for different agonistic categories. ADVANCE children significantly increased the total number of different prosocial solutions they proposed, $t(26) = 3.02$, $p < .01$, whereas the GDVM-only children showed no significant change, $t(27) = 1.37$, $p < .18$ (see Table 3).

Consumer Satisfaction

In a comparison of the two groups at short-term follow-up on their consumer satisfaction measures, an ANOVA indicated that ADVANCE mothers reported significantly ($p < .01$) more improvements in child adjustment than GDVM-only mothers (see Table 4). ADVANCE mothers' ratings of the usefulness of the strategies that they learned in GDVM (e.g., playing, rewarding, ignoring, etc.) were significantly higher than GDVM-only mothers' ratings. ADVANCE fathers rated the strategies that they learned in the basic program as significantly ($p < .05$) easier to implement than GDVM-only fathers did.

In addition, mothers and fathers evaluated the specific components of ADVANCE. Overall, mothers found the content to be moderately easy to implement, with anger management rated as the most difficult component to implement and communication and problem-solving skills between adults rated as the least difficult. They reported all the skills to be highly useful ($M = 6.42$ on a 7-point scale), with problem solving rated as the most useful and depression control rated as the least useful

Table 2
Mother and Father Interactions With Their Children by Treatment Group and Time

	GDVM only						GDVM + ADVANCE					
	Pretreatment		Post-GDVM		Short-term follow-up		Pretreatment		Post-GDVM		Short-term follow-up	
DPICS measure	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Mother												
Total criticisms	15.18	11.23	9.37	11.15	9.21	11.05	13.32	12.68	7.86	6.44	7.45	6.03
Reflective/descriptive statements	46.69	26.71	57.09	31.77	59.22	33.12	49.16	32.41	54.95	35.13	57.96	34.89
Total praise	5.60	7.11	11.05	8.82	10.27	9.61	5.26	4.00	10.45	7.44	11.78	10.53
Child with mother												
Deviance + noncompliance	19.59	16.10	12.32	9.40	10.12	9.13	17.49	14.86	13.70	9.26	11.38	9.05
Father												
Total criticisms	11.48	10.03	5.03	3.80	5.00	4.79	12.24	8.22	6.57	5.27	7.19	7.78
Reflective/descriptive statements	30.28	21.41	40.95	22.34	39.10	24.78	34.67	19.24	39.91	24.77	37.52	17.66
Total praise	2.40	1.94	5.77	5.07	5.93	6.08	4.06	3.22	7.28	7.48	6.69	4.79
Child with father												
Deviance + noncompliance	17.88	11.37	7.75	5.81	8.12	6.99	17.31	14.45	9.13	6.31	9.65	7.30

Note. For the GDVM program only, $N = 69$ (39 mothers, 30 fathers). For GDVM + the ADVANCE component, $N = 64$ (37 mothers, 27 fathers). DPICS = Dyadic Parent–Child Interaction Coding System.

(Table 5). Fathers found the content to be fairly easy to implement, with anger management rated as the most difficult and teaching children problem-solving skills rated as the least difficult. Like mothers, they reported that all the skills were useful, with problem solving rated as the most useful and depression control rated as the least useful.

Clinical Significance

In the assessment of the clinical significance of the findings, several criteria were used. The first was the extent to which parent reports of personal distress and child adjustment were within the normal or nonclinical range of functioning on standardized measures (Jacobson, et al., 1984; Kendall & Grove, 1988). To be classified as a responder to treatment, the parent had to report a score on the BDI, MAT, -PSI, ECBI, or CBCL within the normal range—below the 90th percentile. To be classified as a responder on the parent–child interactions and marital observational measures, where there are no established normative data, the parent or child had to show a 30% improvement above baseline. This percentage has been used by other researchers as an indication of clinically significant changes (e.g., Patterson et al., 1982). Both behavioral and report criteria were chosen to avoid reliance on a single informant or criterion measure and to provide validity to the findings.

Parent reports of child adjustment. Because a MANOVA revealed no significant differences on the parent reports of child adjustment between the two groups on short-term follow-up, the two groups were combined for an analysis of clinical significance. All 77 mothers reported abnormal ECBI scores at baseline; of these, 41 (53.2%) changed into the normal range and 36 (46.8%) remained abnormal at short-term follow-up. Similar results were found for mother reports on the CBCL (Table 6). On the basis of the 49 mothers (64%) who reported pretreatment CBCL behavioral problems in the abnormal range (T scores above 63), 26 mothers (53.1%) at short-term follow-up showed a clinically significant change into the normal range. Overall, at short-term follow-up, 29.9% of all treated mother reports on the CBCL were still in the abnormal range, compared with 10% in the general population.

Of the 45 (81.1%) fathers who reported abnormal ECBI at baseline, 25 (55.6%) showed a clinically significant change into the normal range at short-term follow-up. Father CBCL reports were based on 34 treated fathers (61.8%) who reported pretreatment CBCL behavior problem scores in the abnormal range. Of these, 22 fathers (64.7%) showed a clinically significant change into the normal range at short-term follow-up. Overall, at short-term follow-up, 24.5% of all treated fathers still reported their children's adjustment on the CBCL in the abnormal range, compared with 10% of the general population.

Parent reports of interpersonal distress. The clinical significance of the results on the parent distress measures are presented in Table 6. Generally, one third of the mothers and one fourth of the fathers fell in the abnormal range pre-GDVM according to the normative data for MAT, BDI, or PSI distress measures. On the marital distress measure, 17.6% of the maritally distressed mothers and 22.2% of the maritally distressed fathers had changed to normal by short-term follow-up. On the depression measure, 54.2% of the distressed mothers and 83.3% of the distressed fathers had changed to normal by short-term follow-up. On the parent stress measure, 48.1% of the distressed mothers and 61.5% of the distressed fathers had changed to normal by short-term follow-up. Overall, one third of the mothers and fathers still reported distressed marriages at short-term follow-up, whereas only 20% of the mothers and 10% of the fathers reported significant stress or depressive symptoms.

Home observations of mother- and father–child interactions. Home observation results were again combined for both groups because MANOVA did not indicate Group × Time interaction

Table 3
Observations of Couple Problem Solving and Communication Skills and Child Social Problem Solving Skills by Treatment Group and Time

Measure	*M* (and *SD*) for GDVM only		*M* (and *SD*) for GDVM + ADVANCE		*F* for Group × Time interaction
	Marital PS-I CARE				
	Post-GDVM	Short-term follow-up	Post-GDVM	Short-term follow-up	
Mother					
Problem-solving skills	11.25 (3.30)	9.42 (2.83)	9.77 (3.54)	12.45 (3.29)	15.27***
Problem definition	2.50 (.98)	2.29 (1.00)	2.23 (.92)	2.82 (1.14)	4.66*
Solution generating	1.67 (1.01)	.71 (.75)	1.05 (.95)	2.05 (1.33)	22.77***
Making plans	2.13 (1.08)	1.75 (1.07)	2.00 (1.23)	2.68 (1.64)	7.02**
Collaboration skills	3.56 (1.23)	3.04 (1.30)	3.45 (1.18)	3.68 (1.43)	4.52*
Communication ratio[a]	.67 (.29)	.68 (.25)	.58 (.24)	.73 (.23)	5.21*
Father					
Problem-solving skills	10.29 (3.13)	9.21 (2.75)	9.73 (2.95)	12.36 (3.32)	14.78***
Problem definition	2.04 (.75)	2.25 (.99)	2.27 (1.08)	2.86 (.83)	4.90*
Solution generating	1.71 (1.23)	.79 (.66)	1.32 (.95)	1.82 (1.22)	9.81**
Making plans	2.17 (1.20)	1.58 (1.14)	1.86 (1.39)	2.45 (1.63)	6.88**
Collaboration skills	3.58 (1.18)	3.17 (1.13)	3.64 (1.18)	3.59 (1.37)	4.52*
Communication ratio[a]	.71 (.27)	.66 (.25)	.60 (.19)	.79 (.21)	21.00***
	Child SPST-R				
	Pretreatment	Short-term follow-up	Pretreatment	Short-term follow-up	
Total	24.21 (10.76)	25.14 (7.20)	18.85 (8.02)	24.30 (8.21)	
Total different prosocial	4.29 (1.90)	3.79 (1.81)	3.44 (1.37)	4.19 (1.44)	6.83**
Total different agonistic	1.36 (1.19)	1.50 (1.35)	1.37 (1.28)	1.33 (1.36)	

Note. For the GDVM program only, $N = 24$ couples. For GDVM + the ADVANCE component, $N = 22$ couples. PS-I CARE = Problem-Solving-Interaction Communication-Affect Rating-Engagement System; SPST-R = (Child) Social Problem-Solving Test–Revised.
[a] This score is a ratio of total positive communication skills to total positive plus negative communication.
* $p < .05$. ** $p < .01$. *** $p < .001$.

effects. Forty-seven (61%) mothers showed a 30% reduction in critical statements, and 56 (72.7%) showed a 30% increase in praise statements at short-term assessment. Of the fathers, 70.2% showed a clinically significant reduction in critical statements, and 63.2% showed a 30% increase in praise. 66.2% of children showed a 30% reduction in child deviance and noncompliance when interacting with mothers; this was true for 59.6% of children while interacting with fathers. On the SPST at short-term follow-up, 41.8% of the children showed a 30% increase in the ratio of prosocial to agonistic solutions, and 43.6% showed a 30% increase in the number of different prosocial categories.

Parent communication and problem solving. Because MANOVA indicated significant interaction effects, the results for the Communication Measures × Treatment group are reported. On the marital communication measure, 72.2% of ADVANCE mothers showed a 30% increase in problem-solving skills, their communication ratio, or both. This is contrasted with 33.3% of GDVM-only mothers, $\chi^2(1) = -5.65$, $p < .02$. Similarly, 72.7% of ADVANCE fathers showed a 30% increase in problem solving or communication ratio, in comparison to the 29.2% of GDVM-only fathers who improved, $\chi^2(1) = 7.06$, $p < .01$.

Relationship Between Clinically Significant Improvements in Observed Marital Communication and Problem-Solving Skills, Distress, Parenting Behaviors, and Child Behaviors

One of the primary purposes of this study was to determine whether change in parents' general interpersonal conflict resolution and coping skills—as taught in the ADVANCE program—would result in improved parenting and child behaviors. Therefore, I looked at whether a clinically significant response on the PS-I CARE communication and problem-solving variables (i.e., 30% improvement) was associated with significant improvements in parent reports of child adjustment, observed parent criticisms, child deviance, and social skills at short-term follow-up. The results indicated no significant differences in these respects between mothers who were categorized as responders according to the PS-I CARE measure and mothers who did not show a clinically significant response on

this measure. Also, there were no significant differences on the PS-I CARE in child behavior improvements between father responders versus nonresponders. However, there was a significant difference between father responders and nonresponders on the PS-I CARE marital communication measure in terms of improvement of fathers' parenting skills and child social skills. Of fathers who were classified as responders on the PS-I CARE marital measure, 94.7% had a clinically significant reduction in criticisms when interacting with their children. This is in contrast to 60.9% of the fathers who did not show a significant improvement in their problem solving and communication skills, $\chi^2(1) = 4.56$, $p < .03$. Of fathers who responded in their problem solving, communication ratio, or both, 71.4% of their children showed a significant (30%) increase in the number of prosocial categories on the SPST, as contrasted with 16.7% of the children of nonresponder fathers.

Because both groups showed significant improvement ($p < .03$) in parent BDI depressive symptoms and PSI stress levels, I also examined how improvements on these distress measures (into the normal range) were associated with parent reports of child adjustment and observed child deviance. Analysis indicated that 77% of the mothers whose BDI scores were in the normal range at short-term follow-up (versus 43.8% of mothers with BDI still in the abnormal range) reported child adjustment in the normal range according to the CBCL, $\chi^2(1) = 5.21$, $p < .02$. Also, 51.2% of mothers whose BDI scores were in the normal range (in contrast to 8.1% of mothers with abnormal BDI scores) had children who showed a 30% increase in their ratio of positive to negative prosocial skills, $\chi^2(1) = 5.41$, $p < .01$. Similarly, 78% of mothers whose PSI scores were in the normal range (in contrast to 46.7% of mothers with PSI in the abnormal range) reported normal CBCL scores, $\chi^2(1) = 4.33$, $p < .04$; 53.7% of mothers whose PSI scores were in the normal range had children who showed a 30% increase in ratio of positive to negative prosocial skills, in contrast to 7.7% of mothers with abnormal PSI, $\chi^2(1) = 6.75$, $p < .009$. For fathers, there were no significant relationships between a clinically significant response or nonresponse on BDI and PSI distress measures and clinically significant improvements in perceived child adjustment (CBCL reports) or observed child behaviors.

Finally, the relationship between clinically significant improvements in parenting skills and child outcome was examined. For both mothers and fathers, there was a significant relationship between a 30% reduction in parent criticals and a 30% reduction in child deviance. A clinically significant decrease on observed child deviance was greater for mothers who showed a 30% reduction in criticals (78.8%) than for mothers who did not decrease their criticals (46.7%), $\chi^2(1) = 7.04$, $p < .01$. Similarly, observed child deviance was more likely to decrease for fathers who showed a reduction in criticals (75.0%) than for fathers who did not decrease criticals (23.5%), $\chi^2(1) = 11.08$, $p < .001$.

Table 4
Parent Evaluation of the GDVM Program by Treatment Group and Time

Evaluation measures	Short-term follow-up: GDVM only *M*	GDVM only *SD*	GDVM + ADVANCE *M*	GDVM + ADVANCE *SD*	*t*
Mothers' ratings					
Improvement	64.24	7.59	68.45	5.00	2.86**
Usefulness					
All techniques	6.05	.73	6.53	.60	3.07**
Play	5.71	1.33	6.26	1.03	2.02*
Attend	5.37	1.34	5.68	1.40	1.00
Reward	6.21	.70	6.61	.68	2.49**
Ignore	5.05	1.18	5.82	1.09	2.93**
Commands	5.87	.78	6.29	.77	2.38*
Time out	5.66	1.48	6.21	.96	1.93*
Fathers' ratings					
Improvement	63.59	8.06	67.44	4.84	2.13*
Usefulness					
All techniques	6.15	.66	6.22	.64	.42
Play	5.48	1.12	5.89	.85	1.51
Attend	5.70	.67	5.56	1.05	.62
Reward	5.93	.83	6.33	.68	1.98*
Ignore	5.26	.98	5.59	.93	1.28
Commands	5.93	.68	6.00	.78	.37
Time out	6.00	.73	6.19	.68	.96

Note. For the GDVM program only and for GDVM + the ADVANCE component, $N = 65$ (38 mothers, 27 fathers).
* $p < .05$. ** $p < .10$.

Table 5
Parent Consumer Satisfaction with the GDVM + ADVANCE Program

Evaluation measures	Mother *M*	Mother *SD*	Father *M*	Father *SD*
Difficulty				
All techniques	4.97	1.08	5.42	.88
Anger management	4.24	1.42	4.75	1.03
Depression control	4.26	1.48	4.88	1.23
Stress management	4.29	1.11	4.87	1.26
Communication–adult	5.05	1.06	5.04	1.16
Communication–child	4.95	1.04	5.39	.78
Problem solving	4.74	1.33	5.26	.92
Support	4.53	1.48	4.91	.95
Usefulness				
All techniques	6.42	.95	6.04	.91
Anger management	5.97	.94	5.58	.93
Depression control	5.42	1.35	5.38	1.06
Stress management	5.61	1.15	5.71	.86
Communication–adult	6.03	.94	5.92	1.02
Communication–child	6.24	1.05	5.96	.82
Problem solving	6.29	.77	5.74	1.05
Support	5.92	.97	5.61	.94

Note. $N = 62$ (38 mothers, 24 fathers).
The scale ranges from 1 (*not at all useful* or *difficult to implement*) to 7 (*extremely useful* or *easy to implement*).

Discussion

This study hypothesized that a broader based ADVANCE intervention would improve parents' communication and prob-

Table 6
Parent Report Data: Clinical Significance of Treatment Effects Immediately Post-ADVANCE

Measure	Abnormal scores at baseline		Abnormal scores that became normal at short-term follow-up		Normal scores at short-term follow-up	
	%	N	%	N	%	N
Parent report of child adjustment						
Mother						
ECBI	100.00	77	52.20	41	53.20	41
CBCL	64.00	49	53.10	26	70.10	54
Father						
ECBI	44.40	20	55.60	25	60.00	33
CBCL	61.80	34	64.70	22	74.50	41
Parent report of personal distress						
Mother						
MAT	32.10	17	17.60	3	66.00	35
BDI	31.20	24	54.20	13	79.2	61
PSI	36.50	27	48.10	13	79.70	59
Father						
MAT	34.60	18	22.20	4	69.20	36
BDI	21.80	12	83.30	10	89.10	49
PSI	23.60	13	61.50	8	90.90	50

Note. ECBI = Eyberg Child Behavior Checklist; CBCL = Child Behavior Checklist; MAT = Marital Adjustment Test; BDI = Beck Depression Inventory; PSI = Parenting Stress Index.

lem-solving skills and children's behavior problems, compared with parenting skills training (GDVM). Our results provided only partial support. Consistent with other studies (e.g., Dadds et al., 1987; Griest et al., 1982), families who received the combined programs showed modestly improved outcomes, compared with families who received only GDVM. Specifically, families in the combined program showed significant improvements in parents' problem-solving, communication, and collaboration skills, as well as in children's problem solving. Both mothers and fathers from the combined program reported increased consumer satisfaction in terms of usefulness and ease of implementation of the parenting skills. This suggests that, for the parents, the ADVANCE program resulted in better understanding and generalizing of the concepts taught in the basic GDVM program. However, the significantly enhanced improvements produced by ADVANCE were not accompanied by corresponding differences between ADVANCE and GDVM parents' self-reports of marital satisfaction, anger, or stress levels at short-term follow-up. Even more importantly, ADVANCE parents' reports did not reflect enhanced improvements in their children's behavior, nor did independent observations of parent–child interactions in the home indicate that children of parents trained in ADVANCE had significantly less deviance than children of GDVM-only parents.

One possible reason for the lack of differences in the two groups in these respects is that the significant improvements in ADVANCE parents' relational skills may have delayed effects. Because marital interactions were assessed immediately after completing ADVANCE, it is possible that the ADVANCE parents' improved relational skills may not yet have produced corresponding changes in their affect and feelings. Moreover, for children to benefit from their parents' improvements, it may be necessary for them to be exposed to repeated modeling of their parents' more effective interpersonal skills over a sustained period of time—especially because they had been exposed to negative models for so long. Nonetheless, ADVANCE children did exhibit significantly enhanced knowledge of prosocial strategies in response to a hypothetical problem, although this knowledge was not accompanied by corresponding behavioral improvements. Long-term follow-up assessments are necessary for determining possible delayed effects on children's behaviors as a result of their parents' improved communication, problem-solving, and coping skills.

A second possible reason for the lack of additional gains may be due to a ceiling effect (i.e., the degree of clinically significant improvements on these measures produced by GDVM on its own). Because this is the first time that I have evaluated the GDVM program's secondary effects on factors such as parental anger and depressive symptoms, such significant improvements on these measures were not anticipated. Perhaps the social support provided by the discussion group, combined with GDVM parents' increased sense of competence regarding parenting and their success in managing their children's behavior, decreases parents' overall stress, depression, and social isolation, symptoms originating in their difficulties with their children's behavior. In any case, observations of parental communication and problem solving and assessments of children's problem-solving strategies are perhaps a better measure of the success of ADVANCE, because these were the new skills that were specifically targeted to help parents cope with conflict, anger, and depression. Perhaps, over the long term, improvements in these skills will result in further improvements in parental affect and

children's behaviors, but this remains to be determined. Meanwhile, there is now some important information about the GDVM parent-training program's ability to produce significant changes in parents' depression, anger, and stress levels.

A third possible reason for the lack of additional gains from ADVANCE may be that the model was incomplete. It was originally hypothesized that parent training represented too narrow a focus, that it did not address parents' other needs for coping skills to deal with their relationship problems, life stress, and lack of support. On the basis of the work of a considerable number of researchers (e.g., Grych & Fincham, 1990; Jouriles et al., 1991), it was theorized that children's aggressive conduct and reactions to conflict are modeled on parents' relational patterns and responses to stress and conflict—that is, the present model proposed a direct relationship between parents' lack of interpersonal skills and children's conduct problems. ADVANCE was developed to test this model.

As discussed earlier, the results were mixed. Clinically significant improvements in ADVANCE mothers' marital communication and problem-solving skills did not result in added improvements in their parenting skills or in their children's behaviors on short-term assessments. On the other hand, clinically significant improvements in fathers' marital communication and problem solving resulted in added improvements in parenting skills (significantly reduced criticisms) and clinically significant increases in children's prosocial strategies. (Of interest, however, is that improvements on mothers' dysphoria and stress levels were associated with clinically significant improvements in their reports of child adjustment and children's prosocial strategies.) Perhaps effective parenting can buffer the effects of marital conflict and negative marital communication on children's behavior; this appears to be the case for mothers but not for fathers. Obviously, further causal modeling work is needed to explore the direct and indirect links between marital processes, parents' personal adjustment, parenting skills, and child adjustment.

The second purpose of this study was to evaluate the acceptability of videotape modeling and group discussion as a means of teaching communication and coping strategies. I was unsure of how parents would react to their interpersonal difficulties being addressed in open group discussion, especially because they had come to our clinic for help with their child's problems, not their own. However, my assumptions that families would expect or want to address interpersonal issues in private with an individual therapist were dispelled. Because parents perceived the group as supportive, they found it safe to discuss difficult issues and to share interpersonal problems. That only one family dropped out of the program attests to its perceived usefulness. All the families attended over two thirds of the sessions, with the majority attending over 90%. Consumer satisfaction with the program was high.

This study provided some important information regarding the clinical significance of our results. Twenty-five percent of the mothers and fathers in both groups reported their children in the abnormal range postintervention; independent observations corroborated these findings. Thirty-three percent of the mothers were still maritally distressed postintervention. Twenty-eight percent of parents showed no clinically significant improvements in communication and problem-solving skills post-ADVANCE. Consistently, one fourth to one third of subjects failed to respond to treatment.

One important limitation of this study's design deserves comment. Because therapy time was not held constant across both treatments, it cannot be determined from this study exactly which aspect of the ADVANCE program accounts for the differences in results between GDVM and ADVANCE. The significant results for the ADVANCE families may simply be due to families having had a longer period of time in treatment. Ideally, the comparison parent-training program (GDVM) should have been identical in duration to the ADVANCE training program. However, for ethical reasons, I did not feel that I could ask GDVM families to attend 14 additional weeks (28 hrs) of either a placebo treatment or a mere review of parent-training content. I also did not feel that any of the components in the combined program could be reduced without being substantially compromised. It is suggested that a future study conduct the necessary dismantling of the intervention.

Another limitation of this study is that the data do not extend beyond short-term follow-up. To fully test the hypothesized model, one needs to know whether families who show improved marital communication and problem-solving skills show more stable improvements in child behaviors over time. Nonetheless, this study contributes to "model building" by suggesting that, for mothers, clinically significant changes in stress and depressive symptoms are related to clinically significant improvements in reported child adjustment and children's prosocial skills and that, for fathers, significant changes in marital communication and problem solving are related to significant changes in parenting and children's prosocial skills. This implies a more complex model of how marital interactions, personal adjustment, and parenting are related to conduct disorder.

As the field of behavioral family intervention has matured, it has become important to consider the contextual variables that influence parents' behavior toward their children; hence, the child's learning environment. This study suggests that a videotape modeling group discussion treatment focusing on management of personal distress and interpersonal relationships is promising in several respects: It can produce more positive marital communication and problem-solving skills; it can be perceived by parents as more useful than parent training alone; for mothers, it can reduce stress and depression; for fathers, it can decrease parental criticism; it increases children's problem-solving strategies; it offers a cost-effective alternative to adjuncts involving individual therapy. The program did not produce the anticipated improvements in child deviant behaviors at short-term follow-up. Nonetheless, even if the ADVANCE program does not substantially add to the improvements in child conduct problems produced by parent training, if it can improve family functioning and risk factors by helping parents learn more effective communication and coping strategies to deal with the increased stress and conflict in their lives, it is clinically relevant. Interventions such as these can strengthen the family's protective factors, thereby mediating the disruptive effects of other, more intractable risk factors such as socioeconomic disadvantage and negative life stressors.

References

Abidin, R. R. (1983). *Parenting Stress Index: Manual.* Charlottesville, VA: Pediatric Psychology Press.

Achenbach, T. M., & Edelbrock, C. S. (1991). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile.* Burlington, VT: University Associates in Psychiatry.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., rev.). Washington, DC: Author.

Beck, A. T. (1972). *Depression: Causes and treatment.* Philadelphia: University of Pennsylvania Press.

Dadds, M. R., Schwartz, S., & Sanders, M. R. (1987). Marital discord and treatment outcome in behavioral treatment of child conduct disorders. *Journal of Consulting and Clinical Psychology, 55,* 396–403.

D'Zurilla, T. J., & Nezu, A. (1982). Social problem-solving in adults. In P. C. Kendall (Ed.), *Advances in cognitive-behavioral research and therapy* (Vol. 1.). New York: Academic Press.

Gottman, J., Notarius, C., Gonso, J., & Markman, A. (1976). *A couple's guide to communication.* Champaign, IL: Research Press.

Griest, D. L., Forehand, R., Rogers, T., Breiner, J. L., Furey, W., & Williams, C. A. (1982). Effects of parent enhancement therapy on the treatment outcome and generalization of a parent training program. *Behaviour Research and Therapy, 20,* 429–436.

Griest, D. L., Forehand, R., Wells, K. C., & McMahon, R. J. (1980). An examination of differences between nonclinic and behavior-problem clinic-referred children and their mothers. *Journal of Abnormal Psychology, 89,* 497–500.

Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: A cognitive contextual framework. *Psychological Bulletin, 108,* 267–290.

Jacobson, N. S., Follette, W. C., & Revenstorf, D. (1984). Psychotherapy outcome research: Methods for reporting variability and evaluating clinical significance. *Behavior Therapy, 15,* 336–352.

Jacobson, N. S., & Margolin, G. (1979). *Marital therapy: Strategies based on social learning and behavior as exchange principles.* New York: Brunner/Mazel.

Jouriles, E. N., Murphy, C. M., Farris, A. M., Smith, D. A., Richters, J. E., & Waters, E. (1991). Marital adjustment, parental disagreements about child rearing, and behavior problems in boys: Increasing the specificity of the marital assessment. *Child Development, 62,* 1424–1433.

Kendall, P. C., & Grove, W. M. (1988). Normative comparisons in therapy outcome. *Behavioral Assessment, 10,* 147–158.

Lewinsohn, P. M., Antonuccio, D. O., Steinmetz, S. L., & Teni, L. (1984). *The coping with depression course.* Eugene, OR: Castalia.

Locke, H. J., & Wallace, K. M. (1959). Short marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living, 21,* 251–255.

Maiuro, R. D., Vitaliano, P. P., & Cohn, T. S. (1987). A brief measure for the assessment of anger and aggression. *Journal of Interpersonal Violence, 2,* 166–178.

Meichenbaum, D. (1977). *Cognitive behavior modification.* New York: Plenum Press.

Patterson, G. R., Chamberlain, P., & Reid, J. B. (1982). A comparative evaluation of a parent training program. *Behavior Therapy, 13,* 638–650.

Patterson, G. R., & Fleischman, M. J. (1979). Maintenance of treatment effects: Some considerations concerning family systems and follow-up data. *Behavior Therapy, 10,* 168–185.

Robinson, E. A., & Eyberg, S. M. (1981). The dyadic parent–child interaction coding system: Standardization and validation. *Journal of Consulting and Clinical Psychology, 49,* 245–250.

Robinson, E. A., Eyberg, S. M., & Ross, A. W. (1980). The standardization of an inventory of child conduct problem behaviors. *Journal of Clinical Child Psychology, 9,* 22–28.

Rubin, K. H., & Krasnor, L. R. (1983). Social-cognitive and social behavioral perspectives on problem-solving. In M. Perlmuller (Ed.), *Minnesota symposia on child psychology* (Vol. 18, pp. 1–68). Hillsdale, NJ: Erlbaum.

Schmaling, K. B., & Jacobson, N. S. (1987, November). *The clinical significance of treatment gains resulting from parent training interventions for children with conduct problems: An analysis of outcome data.* Paper presented at the meeting of the Association for the Advancement of Behavior Therapy, Boston.

Spivak, G., & Shure, M. B. (1974). *Social adjustment of young children: A cognitive approach to solving real-life problems.* San Francisco: Jossey-Bass.

Wahler, R. G. (1980). The insular mother: Her problems in parent-child treatment. *Journal of Applied Behavior Analysis, 13,* 207–219.

Webster-Stratton, C. (1984). Randomized trial of two parent training programs for families with conduct-disordered children. *Journal of Consulting and Clinical Psychology, 52*(4), 666–678.

Webster-Stratton, C. (1985a). The effects of father involvement in parent training for conduct problem children. *Journal of Child Psychology and Psychiatry, 26,* 801–810.

Webster-Stratton, C. (1985b). Predictors of treatment outcome in parent training for conduct disordered children. *Behavior Therapy, 16,* 223–243.

Webster-Stratton, C. (1989a). The relationship of marital support, conflict, and divorce to parent perceptions, behaviors and childhood conduct problems. *Journal of Marriage and the Family, 51,* 417–430.

Webster-Stratton, C. (1989b). Systematic comparison of consumer satisfaction of three cost-effective parent training programs for conduct problem children. *Behavior Therapy, 20,* 103–115.

Webster-Stratton, C. (1990a). Long-term follow-up of families with young conduct problem children: From preschool to grade school. *Journal of Clinical Child Psychology, 19,* 144–149.

Webster-Stratton, C. (1990b). Stress: A potential disruptor of parent perceptions and family interactions. *Journal of Clinical Child Psychology, 19,* 302–312.

Webster-Stratton, C. (1993). What really happens in parent training? *Behavior Modification, 17,* 407–456.

Webster-Stratton, C., & Hammond, M. (1988). Maternal depression and its relationship to life stress, perceptions of child behavior problems, parenting behaviors, and child conduct problems. *Journal of Abnormal Child Psychology, 16,* 299–315.

Webster-Stratton, C., & Hammond, M. (1990). Predictors of treatment outcome in parent training for families with conduct problem children. *Behavior Therapy, 21,* 319–337.

Webster-Stratton, C., King, M., & Hollinsworth, T. (1991). *Problem-Solving-Interaction Communication-Affect Rating-Engagement Coding System (PS-I CARE).* Unpublished manual.

Webster-Stratton, C., Kolpacoff, M., & Hollinsworth, T. (1989). The long-term effectiveness and clinical significance of three cost-effective training programs for families with conduct-problem children. *Journal of Consulting and Clinical Psychology, 57,* 550–553.

Whipple, E., & Webster-Stratton, C. (1991). The role of parental stress in physically abusive families. *Child Abuse and Neglect, 15,* 279–291.

Received October 28, 1992
Revision received June 30, 1993
Accepted August 4, 1993 ■