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THE EFFECTS OF PSYCHOSOCIAL STRESS AND PARENTAL ADJUSTMENT
ON ENGAGEMENT IN BEHAVIORAL PARENT TRAINING

By

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A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Psychology

1986

ABSTRACT

THE EFFECTS OF PSYCHOSOCIAL STRESS AND PARENTAL ADJUSTMENT ON ENGAGEMENT IN BEHAVIORAL PARENT TRAINING

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6/13/89

Behavioral parent training has become the primary mode of behavioral family therapy for families with aggressive, noncompliant or hyperactive children. The current study examines the relationship between parental adjustment, stress, and the extent to which parents become engaged in the therapy process. Subjects were 30 families, including 30 mothers and 21 fathers, participating in a training package for families with hyperactive children. Measures of depression, marital adjustment, stressful events, social support, and expectations for therapy were used to predict attendance at therapy sessions, homework completion, therapists' ratings of resistant behavior in therapy, and satisfaction with treatment. The results suggest that mothers experiencing more depression and reporting more of certain kinds of stressful events attended fewer therapy sessions. Ratings of resistance and consumer satisfaction were also predicted by measures of stress and adjustment. A combination of variables was also found which discriminated engaged mothers from non-engaged mothers.

ACKNOWLEDGEMENTS

I would like to thank my committee chairman, Dr. Wade F. Horn for providing the setting for this research, and for allowing me to carve out a place of my own in a very large and complicated enterprise. Dr. Dozier Thornton also deserves a great deal of thanks. As a clinical supervisor and committee member, he originally raised in my mind many of the issues which prompted this study. I would also like to thank the other members of my committee, Drs. Neil Schmitt and Mark Rilling.

This research could not have been carried out without the cooperation of the many graduate students and undergraduates who made up the staff of the Child Behavior Project. Alison Card, Greg Greenberg, and Mike Lopez deserve special mention.

Even more special thanks are due to Nick Ialongo, who more than anyone else has been responsible for keeping the wheels grinding, and who has been both a tremendous influence on my work, and a good friend.

Finally, thank you, Lisa. I only hope my support is worth as much to you when you come to your own dissertation, as well as during the rest of our life together.

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INTRODUCTION

Since the mid-1960s parent training has become increasingly prevalent as a mode of behavioral family therapy for families with aggressive, antisocial, noncompliant or hyperactive children. Packard (1983), in a systematic review of Psychological Abstracts from 1935 to 1980, explored the ways in which parents had been involved in psychotherapy for their children's problems. In early writings parents were often mentioned as being important to the process of child psychotherapy, but only with the rise of applied behavior analysis after 1960 were parents routinely used as direct agents of intervention. Typically such interventions have focused on training parents to structure contingencies in the child's environment so as to reduce undesirable child behaviors and increase desirable ones.

Reviewers such as O'Dell (1974) and Graziano (1977) have noted the consistency with which researchers in the field have been able to demonstrate behavior change in children in the home and concluded that, though evidence for generalization and maintenance of treatment gains was lacking, behavioral parent training showed great promise as a means of treating children with long-standing, high-rate behavior problems. More recently Baum and Forehand (1981) found that mother-child pairs assessed between 1 and 4.5

years after treatment displayed maintenance of changes in both observed child behavior and mothers' perceptions of child behaviors. Mothers also reported a high level of satisfaction with treatment.

At the same time, however, some studies have failed to find convincing effects of parent training interventions (e.g. Eyberg & Johnson, 1974; Ferber, Keely, & Shemberg, 1974; Johnson & Christensen, 1975). Patterson & Fleischman (1979), reviewing the outcome of parent training studies providing follow-up data, conclude that the case for parent training is far from proven. Results have varied depending on the criterion used to assess treatment gains, with parent report generally indicating improvement in the child's behavior even when independent observations indicate no change. In order to adequately evaluate the success and appropriateness of parent training interventions we must consider both the factors that prompt referral of children for treatment and the response of families to the process of treatment. Answering these questions involves consideration of objective measures of child behavior, parental perceptions of child behavior, parent behavior toward the child before and after treatment, and parent satisfaction with the course of the intervention.

It cannot always be assumed that children are referred for treatment because their behavior differs from that of "normal" children. Lobitz and Johnson (1975) and Rickard,

Forehand, Wells, Griest and McMahon (1981) found that, at least for some families, parents perceived their children as exhibiting deviant behavior even when independent data collected by trained observers did not differentiate clinic samples from non-referred children. Lobitz and Johnson suggest that child behavior may not be consistently the most important variable in assessing childhood behavior problems. In families in which the child's observed level of deviant behavior is not different from that of non-referred children treatment success may hinge not on changing the child's behavior but on changing the parents' perceptions of the behavior. In behavioral parent training parents are taught to select appropriate target behaviors and to systematically track the child's behavior in order to identify and change contingencies. Thus, promoting accurate perceptions on the part of the parent is a key part of the intervention.

The second issue which affects the evaluation of parent training concerns the extent to which parents become committed to and involved in the proposed intervention. A consistent finding in the parent training literature has been that a number of families drop out of treatment before the training is completed. Forehand, Middlebrook, Rogers and Steffe (1983) conducted an archival analysis which indicated that this figure stands at about 28% in the 22 studies they reviewed. They note that since most of the therapeutic contact is with the parents, parents may drop

out of parent training for reasons totally unrelated to changes in the child's behavior. Parents may drop out because of what they feel is the failure of treatment to address the reasons which prompted the referral. This possibility makes it vital to assess parents' satisfaction with the appropriateness of the intervention.

Alternatively, it may be that parents drop out because of factors interfering with their ability to adequately perform the tasks set by the therapists. In this case it becomes important to identify such factors. The growing concern of clinicians and researchers with the issue of "engagement" in behavioral family therapy is indicated by a symposium on the subject held at the 1985 meetings of the Association for the Advancement of Behavior Therapy.

Recent reviewers, seeking to explain why parent training seems to work for some families but not for others, have focused on the necessity of considering family variables in treating oppositional children (Griest & Wells, 1983; Patterson, Reid, & Chamberlain, 1981). Given that parent training can be effective, it becomes desirable to examine why some parents succeed in learning to manage their child's behavior while some do not.

Griest and Wells (1983) have identified areas of family functioning which might be assessed in order to determine the appropriate course of intervention for families with conduct disordered children. These include psychological

parent variables such as depression, marital variables, and social variables such as extended family or community relationships. Griest and Forehand (1982) suggest that such family variables are positively related to child deviance and negatively related to success in parent training. One possible explanation for such a relationship would be that families which are subject to multiple sources of disruption or stress would be less able to implement the child management skills taught in parent training programs. Conversely, it may be that the families who are most successful in parent training are those in which the only notable disruption is in the parent-child relationship. The question which must be asked at this point is, "What are the variables which mediate for or against success in parent training, and how do they affect the therapeutic process so as to influence outcome?" The areas of depression, marital adjustment and social variables outlined by Griest and Wells (1983) form a reasonable base for a discussion of this question.

Parental Personal Adjustment

A series of studies by Griest, Forehand and their colleagues supports the hypothesis that maternal depression is an important influence on the labeling of a child as deviant or non-deviant. Griest, Wells and Forehand (1979) found that not only was maternal depression the best predictor of the mother's perception of the child, but that

the observed behavior of the child failed to add to predictive accuracy beyond what was obtained using maternal depression alone. Griest, Forehand, Wells, and McMahon (1980) compared referred and non-referred groups of children on similar measures and found that for non-referred children the child's behavior was the best predictor of maternal perceptions of the child. In the clinic group, however, it was a combination of maternal personal adjustment and child behavior that best predicted maternal perceptions of the child.

Rickard, Forehand, Wells, Griest and McMahon (1981) examined three different groups of children and their mothers. They compared a clinic-referred group which had been found to differ from non-referred children in levels of deviant behavior (clinic-deviant), a clinic-referred group which did not differ from a non-referred group in levels of observed deviance (clinic non-deviant), and a group of non-referred children. Mothers of both groups of referred children perceived their children as more maladjusted than mothers of the non-referred children. The two clinic groups did not differ on perceived maladjustment of the child, but the mothers of the clinic non-deviant group were significantly more depressed than the mothers of the clinic-deviant group. For the clinic-deviant group, which did display more deviant behavior than non-referred children, it seems that the mothers' perceptions were

accurate, while the more depressed mothers of the clinic non-deviant group perceived relatively normal child behavior as inappropriate. In another study Forehand, Wells, McMahon, Griest, and Rogers (1982) found that for male children a combination of maternal depression, child behavior and socioeconomic status best predicted mothers' perceptions, while for girls no significant combination of predictors was obtained. Forehand and Brody (1985) found that, in a clinic sample in which children were not classified on level of observed deviant behavior, mothers with high scores on depression perceived their children as more maladjusted than mothers with low depression scores.

In contrast to the above results Schaughency and Lahey (1985) found no significant relationships between maternal depression and parent and teacher ratings of maladjustment (total problem score on the Conners questionnaire) when results were adjusted to control for experimentwise type I error rate. They found that teacher ratings, which they assumed to be an independent, objective measure of child behavior, were significantly related to parental perceptions, and conclude that there is no support for earlier findings that parental adjustment significantly predicts perceptions of child behavior. The assumption that teacher and parent ratings of child behavior are independent, and that teacher ratings provide a "true" measure of the level of deviant child behavior is, however,

a questionable one, and the authors do note that the unadjusted correlations tended to support earlier findings. While increased statistical controls in small-sample research are to be desired, the finding that maternal depression is related to perceptions of child behavior has been replicated too often to be easily abandoned.

Independent programmatic research by Patterson and his colleagues at the Oregon Social Learning Center (Patterson, 1982) has also addressed the relationship between parental variables and child deviance. Patterson (1980) compared two samples of mothers before and after their families went through social learning-based family therapy. One group had children classified as "socially aggressive" while the other had children who had been referred for stealing. Mothers of socially aggressive children had pre-treatment MMPI profiles consistent with feelings of depression, anxiety, anger and isolation, and which could be associated with the added stress of being primary caretaker for an aggressive, coercive child. The mothers of stealers exhibited pre-treatment profiles more indicative of acting out behavior on their own part, which Patterson suggests may have preceded the child's difficulties. Treatment resulted in modest decreases in the neurotic patterns for the mothers of socially aggressive children. These mothers also evidenced lower scores on the F scale and higher scores on

the K scale at post-treatment, indicating some improvement in ability to cope with the demands of the environment, but training in child management techniques alone apparently was not enough to substantially alter the mothers' tendency to describe themselves in negative terms.

There is much less information on the personal adjustment of fathers of conduct disordered children. Johnson and Lobitz (1974) found that fathers' MMPI profiles were related to observed deviance in referred boys, while mothers scores were much less clearly related. Fathers' scores on the Hy, Pd, and Sc scales were significantly related to child deviance, and scores on the Hs, D, Ma, and Pa scales were also positively related to child deviance, although these correlations only approached statistical significance. Only the mothers' Pa scores were significantly associated with child deviance. These results are in contrast to the later research cited above, and with Patterson's (1982) findings that the MMPI profiles of fathers involved in treatment at the Oregon Social Learning Center are essentially no different from published data on fathers of normal children (Goodstein & Rowley, 1961; Liverant, 1959; both cited in Patterson, 1982). Schaughency and Lahey (1985) found no relationship between paternal depression and either father or teacher Conners scores. However, it must be noted that research on the association between mothers' personal adjustment and child behavior has

been prevalent, and less attention has been paid to the adjustment of fathers of clinic-referred children.

While the research reviewed in the above discussion suggests that there may be relationships between parental psychopathology and child deviance the nature of these relationships is unclear. Also unknown is the effect of parental psychopathology on the parent training process. Forehand and Furey (1985) hypothesized that maternal perceptions of deviant child behavior, as assessed by the Daily Child Behavior Checklist (DCBC; Forehand & Furey, 1983), would be the primary correlate of depressive mood in mothers of referred children, and carried out a study to test this hypothesis. Nine different mothers filled out the DCBC and a measure of depression, along with measures of other daily negative events, on 30 consecutive days, and the within-subject correlations were examined. The results indicated that negative and positive events not related to the child were the best predictors of maternal mood, implying that reductions in child deviant behavior are not likely to be sufficient to bring about a reduction in maternal depression, and that other factors need to be assessed when there is concern about parental adjustment.

Finally, Forehand (1985) has presented data suggesting that maternal depression may impact on the process of parent training in two ways. Using path analysis he constructed a model in which maternal depression not only influences

negative perceptions of the child's behavior but also indirectly decreases actual child compliance with maternal commands by directly influencing the level of unclear commands or commands which are impossible for the child to carry out. In addition depression in mothers, but not in fathers, was associated with increased reports of deviant classroom behavior by teachers, and lower grades in school. Thus maternal depression may result simultaneously in high levels of child deviance and extremely negative perceptions of the child, both of which must be changed in order for therapy to be successful. Forehand summarized his findings by speculating that depression has both behavioral effects (mothers are more demanding, less consistent, and provide less supervision of the child's activities) and perceptual effects (mothers interpret neutral behavior as deviant, and underestimate their control and overestimate the child's control over interaction). He suggests that parental depression itself may be an appropriate target behavior for behavioral parent training. In support of this view Christensen, Phillips, Glasgow and Johnson (1983) found that, for both mothers and fathers, depression was negatively related to advocacy of a positive approach to dealing with child behavior, where "positive" is defined as the use of feeling expression or positive reinforcement.

As an intervention strategy parent training places great emphasis on the parents' ability to observe child

behavior, evaluate it as appropriate or inappropriate, and decide on and implement consequences which are appropriate and effective. If parental psychopathology distorts perceptions of the child's behavior and alters the parent's disposition to respond irritably or indifferently it is likely to be associated with greater difficulty during parent training and with poorer outcome.

Marital Adjustment

A second variable hypothesized to influence the success of parent training interventions is the marital adjustment of the child's parents. Patterson (1980) proposes that marital satisfaction is a particularly salient influence on the mother's parenting activities. He cites studies demonstrating that mothers' satisfaction with marriage declines over the child-rearing years, and notes that marital satisfaction seems to be largely determined by the impact of aversive behaviors by the husband on the wife. Since the mother tends to have the primary role of childcare and crisis management in most families, it may be that the father's primary role in successfully functioning families is one of support for the mother. The absence or disruption of that support could not only impair the mother's abilities to successfully manage deviant child behavior, but would be likely to make remediation of those problems more difficult. Patterson notes that even mothers of normal children are exposed to relatively high rates of minor aversive events,

and that the kind of dysphoria discussed in the previous section might be exacerbated when aversive events frequently come from the spouse as well. Forehand and Furey's (1985) finding that, for some mothers, negative and positive spouse behaviors were significant predictors of the mother's mood supports this contention. Bond and McMahon (1984) found that maritally distressed mothers not only perceived their children as having more behavior problems than did non-distressed mothers, but also perceived themselves as more depressed and anxious.

It is also possible that marital variables might affect treatment gains. In a study involving four families Reisinger (1982) found that fathers increased their use of differential attention for positive child behaviors when only mothers had received training in the use of such techniques. While he provided no information on marital satisfaction in these couples it might be assumed that some minimal level of cooperation and communication is necessary for such unprogrammed learning to occur.

In a small sample ($N = 17$) Johnson & Lobitz (1974) found correlations in the .3 to .5 range between marital satisfaction as measured by the Locke-Wallace Marital Adjustment Test, observed child deviance, and observed parental negativity toward the child for both mothers and fathers. All correlations were in the predicted direction, with greater marital satisfaction being associated with

lower levels of deviance and parental negativity. Though not all of the correlations reached statistical significance the consistency of the results makes them worth consideration. In a sample of 36 treatment families and 9 nonproblem families Christensen et al. (1983) found that marital adjustment accounted for about 25% of the variance in reports of child behavior problems, with better marital adjustment associated with fewer child problems reported. Parental perceptions of the child were related to both marital adjustment and negative parental behavior toward the child, but not to the child's observed behavior.

In a sample of 95 normal families Ferguson and Allen (1978) found a correlation of .208 between marital adjustment on the Locke-Wallace scale and parental perceptions of child adjustment. Perhaps more interesting is a series of indirect links between marital adjustment and child behavior problems. Locke-Wallace scores were moderately associated with the congruence of parents' perceptions of each other and with the congruence of parents' perceptions of the child. These variables in turn were correlated .31 and .57 with the child's adjustment, suggesting that the greatest effect of marital adjustment may be an indirect one in that it effects parents' tendency to communicate and work together in child management.

Porter and O'Leary (1980) investigated the relationships between overall marital satisfaction, overt

marital hostility and child behavior problems. They found evidence for a relationship between both marital variables and the conduct disorder scale on a behavioral problem checklist for both boys and girls and for two age ranges, 10 years and below, and 11 years and older. The findings for other types of pathology are much less consistent, but in general show some relationship between overt marital hostility and greater pathology for boys, and fewer relationships between either marital variable and pathology for girls.

Forehand (1985) in a path analytic study with 60 families, found that marital adjustment was part of an indirect link between maternal depression and parental behavior toward the child. Marital adjustment was significantly predicted by depression, with more depressed mothers reporting lower marital adjustment, and in turn was negatively associated with the level of unclear or demanding commands given to the child. Christensen et al. (1983) also found that marital adjustment was negatively related to parental depression.

Several other studies have given less support to the relationship of child problems to marital adjustment. Forehand and Brody (1985) found only a trend for mothers with low Locke-Wallace scores to use fewer rewards with their children, while children of mothers with high scores were more compliant. Schaughency and Lahey (1985) found

several relationships between mothers' and fathers' marital adjustment scores and parent ratings of child behavior problems, but these relationships disappeared when controls for experimentwise type I error were used. There were no relationships between marital adjustment and teacher ratings of child behavior even when uncontrolled results are considered. Finally, Griest et al. (1980) found no difference between a group of clinic-referred children and a group of mothers of non-clinic children on marital adjustment scores.

Several studies have examined marital adjustment in the context of parent training programs. Oltmanns, Broderick and O'Leary (1977) assessed marital satisfaction in a group of families before they received treatment, and in a control group of non-clinic families. The marital satisfaction of the clinic families was significantly lower than that of the control families. In the clinic sample there was also a significant negative correlation between marital satisfaction and child deviant behavior as rated by the parents. Marital satisfaction scores declined slightly, but nonsignificantly, for both mothers and fathers following treatment. Families were divided into quartiles on the basis of the average of the parents' marital satisfaction scores, and these groups were compared on therapist ratings of improvement following treatment. There were no significant differences between the groups. Neither was

there any relationship between marital satisfaction and change scores on subscales of a behavioral checklist filled out by the parents before and after treatment.

In a similar study Brody and Forehand (1985) note that Oltmanns et al. (1977) did not examine parent behavior. They assessed the effects of parent training on parent behavior, child compliance, and child deviant behavior following a training program designed to modify parent behavior and child compliance, but not directly targeting child deviant behavior. They found that treatment was equally effective for both maritally distressed and non-distressed mothers in terms of parental perceptions of the child's behavior, and on observations of parent behavior and child compliance. Children in the maritally non-distressed group also exhibited a reduction in deviant behavior from pre- to post-treatment, while there was no change for children in the maritally distressed group. The authors conclude that marital disruption may not effect outcome on specifically targeted behaviors, but that generalization to non-targeted behaviors may be less likely when the marital dyad is distressed.

Reisinger, Frangia and Hoffman (1976) trained six mother-child pairs in toddler-management techniques. While all mothers were able to learn and use these techniques with their oppositional children, as evidenced by observations at a 12-month follow-up, the three mothers who reported marital

difficulties attended to less cooperative child behavior and more oppositional child behavior at follow-up than the mothers who reported no marital difficulties. The mothers reporting marital difficulties also reported limited success in using the management skills, little or no support from their husbands in using the techniques and frequent aversive interchanges with their husbands, findings consistent with more extensive work by Patterson (1982).

Karoly and Rosenthal (1977) reported on nine families trained in a group format. Following this time-limited didactic group the parents reported fewer aversive behaviors by the child, and increased family cohesion as measured by the Moos Family Environment Scale. There was also a nonsignificant decrease in perceived conflict in the family, while, contrary to the investigators' predictions, there were no changes in perceived control over the environment.

Similarly, a single-case multiple-baseline study by Kelley, Embry and Baer (1979) indicated that the results of a behavioral management program were enhanced by the introduction of spouse support training. The parents themselves requested the additional training, stating that they frequently did not agree on standards for the child's behavior, that the father's attention seemed to be more reinforcing for the child than the mother's, and that the child was frequently able to manipulate the parents by playing one against the other. These complaints are

familiar to anyone who has conducted behavioral therapy with families of oppositional children. Training the parents to support each other in dealing with the child resulted in more triadic interactions among family members, in more positive statements by family members, and in a greater percentage of attention to positive child behaviors by the mother. The technique of negotiating over disagreements about the child's behavior generalized to marital disagreements, and the parents increased their support of each other in interactions with the child, reducing the need for reinforcement from the therapist to promote maintenance and generalization of the child management skills.

Forehand, Griest, Wells and McMahon (1982) investigated whether teaching mothers child management skills would result in increased marital satisfaction. Dividing mothers into high, medium and low groups on marital satisfaction the investigators found that the low group increased on the satisfaction measure following training, but did not maintain this gain at a two-month follow-up. Neither the high nor the medium group changed on the measure of marital satisfaction across any of the assessments. The authors note that the change in the low-satisfaction group could be attributed to regression to the mean, and conclude that training mothers in child management alone is not sufficient to alter dissatisfaction with a marriage. Brody and Forehand (1985) also found that maritally distressed mothers

improved on marital satisfaction following treatment, but they do not provide follow-up data, and they note that the maritally distressed mothers' scores remained well below the scores of non-distressed mothers at post-treatment.

One question which has not been adequately addressed is the manner in which marital disruption may impact on mothers' performance in parent training. It is possible that mothers low on marital satisfaction may have more difficulty implementing therapists' directives due to lack of support or even opposition from spouses, even when they are ultimately successful in treatment. It is notable that many investigators in this field routinely fail to include fathers as participants in parent training. While many of the families encountered by therapists working with oppositional children are indeed single-mother families it is disquieting that so little research has appeared which takes into account the potential effects of participation or non-participation by fathers, as well as the impact of husbands' marital satisfaction, on success in parent training.

Taken together the findings on marital satisfaction, child deviance, and parent training seem to indicate that in many cases there is a relationship between the functioning of parents as marital partners and the management of child behavior. It is clear, however, that marital difficulties

do not by themselves differentiate families that experience problems with their children's behavior from families that do not. Rather, marital satisfaction or adjustment must at this point be considered one of the several variables which merit further investigation as a possible influence on the process of behavioral family therapy.

Social Stressors

There are two areas of research bearing on parent training interventions which may be described by the label social stressors. Though a number of researchers have become involved in each area, the two topics have each been particularly associated with work from one laboratory. The first, primarily the work of R.G. Wahler and his associates, involves families whose lives are characterized by low levels of supportive social interactions, and high levels of aversive interchanges with agents of broader society such as social service workers, law enforcement officials, or extended family members. The other area, exemplified by the more recent writings of G.R. Patterson, concerns the daily accumulation in disrupted families of low-level stressful events, of the type Lazarus (1984) has called "daily hassles", which exacerbate the problems these families have in maintaining organization and problem solving.

Wahler, Leske, and Rogers (1977) compared the durability of social learning based treatment in two groups of families. The high-risk group, which they called insular

families, was characterized by poverty, low educational levels, single parents, and residence in areas having high crime rates and crowded living conditions. The low-risk families exhibited none of those features. All the low-risk families referred their own child for treatment, while all the referrals from the high-risk families came through school officials. The authors report that parent training techniques failed to remediate the difficulties of the high-risk families according to every criterion. They hypothesize that families rated as high-risk according to sociological criteria become insulated from the social community, and engage in social interactions which are for the most part dysfunctional or non-functional in terms of family management. These families may be characterized by what Patterson (1976) calls coercive interactions, with the consequence that positive events may occur at low rates for all family members, leading to precisely the kinds of dysphoria and marital conflicts described above. Since positive support for changing the system is lacking either from within or from individuals or agencies outside the family, these families may prove highly resistant to efforts to obtain therapeutic change.

In a second study, Wahler et al. (1977) looked at the frequency and character of social interactions of the mothers of samples of low-risk and insular families. They found that, while low-risk mothers reported an average of

around 10 daily social contacts, the average for high-risk mothers was about half that. They also found that low-risk mothers were more likely to initiate such contacts, and that a majority of those contacts were with friends. The insular mothers had relatively few contacts with friends, and more contacts with helping agencies and extended family members. The mothers reported that contacts with agency workers and members of the extended family tended to be "interfering" rather than supportive. The authors then divided the high-risk mothers into three groups: those from married or intact families, single mothers who were self-supporting, and single mothers who were welfare-dependent. Breaking the results down in this manner revealed that the single, working mothers were consistently more like the low-risk mothers than they were like the other high-risk groups. One interpretation of these findings is that mothers who work may have more frequent contacts with persons outside the home, and thus have the potential for more supportive social contacts. Though the sample sizes are small, these findings suggest that social support plays an important role in the mother's ability to cope with the demands of the daily environment.

Dumas and Wahler (1983) also examined the impact of insularity and socioeconomic disadvantage on the outcome of parent training. In two separate samples they found that socioeconomic disadvantage (a combination family income,

maternal education, family composition, family size, source of referral, and area of residence) significantly discriminated families with a favorable treatment outcome from those with unfavorable outcome. Furthermore, in each sample the addition of a measure of insularity significantly improved the discriminatory power of the model above what was achieved with SES alone. The model correctly classified over 80% of the families in each sample, with SES accounting for 9% and 7% of the variance, and insularity for an additional 16% and 20% of the variance in the two samples.

In contrast, Dumas (1985) examined the impact of parental psychopathology and SES on treatment outcome, and on perceptions of the child. He found that parental psychopathology (along with child psychopathology, birth history, and intellectual functioning) influenced perceptions of the child's behavior, but that only SES was a useful predictor of treatment outcome. Parental psychopathology was associated with SES, though no causal influence in either direction is assumed. Dumas points out that SES is essentially a marker variable for certain unidentified behavioral processes, and that it is these processes, rather than the simple state of economic disadvantage, which may be presumed to influence treatment outcome. In another study Conger, McCarty, Yang, Lahey, and Kropp (1984) found that environmental stressors related to socioeconomic disadvantage influenced maternal behavior both

directly and indirectly through an influence on the psychological state of the mother. Further research needs to be done to determine how SES influences behavioral patterns of parents, which in turn influence parent-child interaction.

Wahler and Dumas (1981) speculate on two aspects of the teaching relationship between parent and child. The first is parent teaching knowledge. The thrust of most parent training interventions to date has been to teach parents techniques of managing children's misbehavior and teaching the children positive, socially desirable behavior. The reasoning behind this tactic is that parents cannot be effective teachers if they lack knowledge of teaching skills. However, interventions aimed at remediating a parenting-skills deficit have tended to assume the second aspect of that relationship discussed by Wahler and Dumas: parent motivation to teach. The authors propose that it is motivation to teach, rather than teaching knowledge, which presents the more difficult clinical problem. They emphasize that mothers are active participants in the coercive system which impedes their teaching efforts. As such they may actually expect to fail.

Wahler and Dumas (1981) also propose that "superstitious" stimulus control is responsible at least in part for the discrepancy between parental perceptions of child behavior and actual observations of child behavior in

coercive families. By superstitious control they mean that events not directly influencing the child's behavior do influence the mother's reaction to the child. Following aversive social interchanges with persons other than the child the mother may become overly inclusive in tracking coercive interchanges with the child, classifying as deviant child behavior that would often be considered acceptable. Wahler and Dumas offer the example of a mother who reports having a bad day with her child, but who when asked for a more detailed description reports a conversation with the child, a fight with a boyfriend, and an argument with a relative. Wahler and Graves (1983) describe further the impact of such "setting events" which, though temporally distant from coercive interactions between parent and child, appear to exert stimulus control over these interactions. Middlebrook and Forehand (1985) have presented data which suggest that the level of stress inherent in a situation can influence mothers to perceive neutral child behavior as deviant. There is also evidence that mothers involved in high rates of aversive interchanges display inconsistency in their interactions with the child (Dumas & Wahler, in press; Patterson, 1976). Since a key element of parent training interventions is teaching parents to observe both their own and their child's behavior, and since that process is likely to be interfered with by non-contingent setting events, interventions aimed at altering the immediate environmental

contingencies governing the child's behavior may not be a sufficient means of dealing with the problems of severely disrupted families. Wahler and Dumas (1981) propose further interventions such as improving mothers' social skills, increasing the level of positively reinforcing relationships for these mothers, and finally, helping mothers take political action which may help restructure the social environment.

Patterson (1982) assumes that lack of caretaking skills is partially responsible for the level of coercive interchanges within a family. He also proposes that this lack of problem-solving skills in part determines the frequency of crises impinging upon the family, such as conflicts among children or between spouses. In one sample the number of crises occurring in a family correlated .31 with the level of the child's coerciveness. Furthermore, these "daily hassles" were found to covary with daily measures of mothers' moods in three of a sample of five mothers. The within-subject correlations are modest, but it is not to be expected that one variable could account for most of the variance in the fluctuations in mothers' moods. Patterson (1983) also found stronger correlations between the frequency of crises and the probability of continued irritable reactions to the child for all five mothers. For two of the mothers, however, the relationship was negative, suggesting that some mothers, when faced with mounting

crises, will become more irritable and participate in more and longer coercive interchanges with the child, while other mothers in the same situation may withdraw from contact with the child. In their similar study Forehand and Furey (1985) found that negative events were better predictors of mothers' moods than positive events, and that events involving the spouse or other events in the mother's life were more likely to influence mood than were events involving the child. Moreover, different combinations of events were predictive of mood for different mothers, emphasizing the need to individually assess each family's environment.

Patterson (in press) presents data supporting two hypotheses to explain why parents may become irritable and rejecting toward a child. One, which he calls the daily hassles hypothesis, posits that mothers will become irritable in response to repeated aversive exchanges with the child through discipline confrontations and conflicts between the target child and siblings. The other hypothesis, also supported by the data, suggests that mothers may become irritable toward the child in response to feedback from the community, school or other parents that the child's behavior is deviant, and thus that she has failed as a mother.

The discussion presented in this section suggests that stress due to social relationships both within and external

to the family may be important mediators of the referral and treatment processes in behavioral parent training. Though a number of researchers have begun to look at the way in which social stress and parental psychopathology change family interaction, little attention has been paid to the mechanism through which social stressors affect the parent training process so as to result (in some cases, at least) in an unsuccessful outcome. The question which remains to be answered is whether parents under high levels of stress react differently to parent-training efforts than less disrupted families, and is it this reaction which results in a greater likelihood of failure? These are issues not of the relationship of stress to outcome, but of stress to process.

Engagement in Parent Training

The preceding review describes three variables which are hypothesized to affect the success of parent training: parents' personal adjustment, satisfaction of marital partners, and the occurrence of high rates of social stressors. The hypothesis that the presence of one or more of these variables may negatively affect the outcome of parent training has received support from a number of investigations. Left unanswered, and thus far largely unaddressed, is the question of what process mediates that failed outcome. In other words, in what ways do the presence of maternal depression, marital dissatisfaction and

social stressors alter the therapeutic process so as to result in a failure to achieve the treatment goals?

Certainly one inadequacy in the current parent training programs may be that not enough things are being taught. It may be necessary to include instruction in general problem-solving skills, assertive training, or social skills, or to more specifically address the individual adjustment problems of the parents or problems within the marital dyad. Griest, Forehand, Rogers, Breiner, Furey and Williams (1982) found that parent training plus a treatment package dealing with the parent's perception of the child's behavior, and the parent's personal adjustment, marital adjustment and extrafamilial relationships was more effective than parent training alone in treating two groups of mothers with noncompliant children. They presented no data, however, on which of the "family variables" presented the greatest impediment to the process of parent training. Moreover, the knowledge that adding a treatment component can improve the chances for positive treatment outcome still does not demonstrate how the process of therapy has changed so as to facilitate that outcome.

Another possibility, one which does not rule out the need for working on such other problem areas, is that parents who are beset with multiple problems are less amenable to learning skills which may result in a change in only a small part of a multiply coercive system. These

parents may engage in behaviors which are counter-productive to the goals or methods of the therapist. Such parents may be labeled resistant or unengaged in that they are unwilling or unable to comply with the treatment regimen prescribed by the therapist.

Goldfried (1982) lists four attitudes on the part of the client which can result in optimal facilitation of the therapeutic process. First, the client must believe that change is possible. Second, the client must acknowledge that the change process will be a gradual one. Third, the client must accept the fact that they, not the therapists, will bear the primary responsibility for changing their lives, and that the therapist's role will be one of teacher or consultant. Finally, the client must be favorably disposed toward the therapeutic strategy proposed by the therapist, and must be at least moderately optimistic regarding its outcome. A less than cooperative position on any of those points may result in uncooperative behavior during therapy sessions. Clients may refuse to engage in specific therapeutic activities such as role-playing or planning homework assignments, may not complete outside assignments, or may not be receptive to corrective feedback from the therapist. Ultimately, the client may miss therapy sessions, or even discontinue therapy entirely.

Cole and Morrow (1976) identified two clusters of behaviors in parents which they believe to be related to a

lack of success in a group parent training program. Though they present no data on these behavior patterns their clinical observations may be instructive. One of these patterns they characterize as an insensitive authoritarian coerciveness toward the child. The emphasis for these parents is on rigid, punitive standards of behavior and insistence on the child's submission to the adult as the ultimate authority figure. The authors perceive these parents as showing pervasively negative attitudes toward the child, overemphasizing the child's negative behavior and refusing to identify or track positive child behaviors. They also tended to insist on immediate and complete improvement in the child's behavior as a precondition for parental approval, and to fail to follow therapeutic strategies in a step-by-step fashion.

A second refractory pattern was that of the parents whose marital relationship interfered with progress in the parent training program. These parents could not agree on behaviors to target for intervention, and arguing over such questions took up group time that might have been more profitably spent. They might finally reach what Cole and Morrow (1976) called "agreement by default", when one parent relented in the matter of targeting a behavior, but then refused to carry out the "agreed upon" intervention plan.

Patterson et al. (1981), and Fleischman (1982) emphasize the importance of clinical skills in dealing with

client resistance to parent training interventions. Patterson, et al. review a number of "failures" in the parent training literature and conclude that many of them have occurred when graduate students were employed as therapists, or when a standardized, time-limited format prevented therapists from paying sufficient attention to family variables interfering with the process of therapy. Fleischman found that therapists conducting field trials of the program developed by Patterson and his associates required close supervision from consultants experienced in the treatment model, indicating that knowledge of social learning principles and parenting techniques is not equivalent to skill as a therapist.

Several investigators have begun to look at factors influencing the extent to which parents become engaged in the process of behavioral parent training. Given the often large number of parents who drop out of parent training (Forehand, et al., 1983), Firestone (1985) has noted that interpretation of results reported in the literature may rest in part on the number and characteristics of the families who discontinue treatment. He found that 68% of the studies he reviewed failed to report the number of subjects who decline treatment before it begins, and few described in detail the characteristics of families who drop out after treatment has started. Of studies which provided enough information to determine a dropout rate, he found

that programs soliciting self-referrals through the media (as opposed to agency referrals) seemed to have lower dropout rates. Dropout rates also seem to be lower as the fee charged for services increases, and are lowest when clients pay a deposit which is refundable on completion of therapy. Of the factors discussed in this review, Firestone found higher dropout rates for single or depressed mothers, and that, though most studies do not consider the psychological state of the parents in assessing dropouts, those that do generally find it important.

Griest, Forehand, and Wells (1981) found that maternal depression was a significant discriminator of families who refused to participate in collection of follow-up data on a parent-training study, while Forehand et al. (1983) suggest that families with more depressed parents and lower socioeconomic status families may be more likely to drop out. Oltmanns et al. (1977) found that families from whom it was difficult to obtain follow-up data were those that attained only small degrees of improvement in therapy. McMahon and Forehand (1983) review issues around consumer satisfaction in child behavior therapy and conclude that it is important to assess the clients' reactions to therapy as one outcome measure.

Blechman (1985) reported data on two samples of families who received behavioral family therapy at a number of different centers around the country. She found four

types of treatment approaches being used: Family Communication Training, Home Token Economy, Marital Interventions, and Parent Support Therapy. She found that families receiving Family Communication Training were the most likely to remain in treatment. Also contributing to engagement in therapy were high occupational prestige, high number of father work hours, and the presence of two natural parents in the home. The number of adults living in the home did not by itself significantly predict continuance in therapy. In the one sample in which parental depression was assessed depression did not add to the predictive ability of the demographic variables. It appears from this data that demographic variables associated with SES may be the primary determinants of failure to become engaged in behavioral parent training. Like Dumas (1985), Blechman notes the need to go beyond the measurement of demographic variables which are only surrogates for behavioral processes and to begin assessing parent and therapist behaviors associated with engagement. One candidate for a class of parent behaviors which may predict failure to become engaged is the type of negative microsocial exchanges discussed above under social stressors. Similarly, recall Forehand's (1985) suggestion that parental depression may lead parents to be more inconsistent, more irritable, and to perceive a greater range of child behavior as deviant, all behaviors which are directly at odds with behavioral strategies aimed at

consistent, effective discipline and the greater use of positive reinforcement.

Chamberlain, Patterson, Reid, Kavanaugh and Forgatch (1984) have developed a molecular code for assessing client resistance during therapy sessions. Though they have as yet reported no data on client characteristics associated with high levels of resistance Patterson (Personal communication, June 19, 1984) has suggested that the level of "daily hassles" experienced by a family will covary with the level of resistance expressed by the parents.

Overview and Hypotheses

The main purpose of the present research was to examine the effects of a variety of psychosocial stressors on the engagement of parents in a parent training program aimed at teaching them behavioral management skills. Five different aspects of psychosocial functioning were assessed: depression, marital adjustment, chronic life stress, low-intensity stressful events ("daily hassles"), and community social support. Depression, marital adjustment, and chronic life stress were thought to be relatively stable, and were assessed only before and after the parent training. Daily hassles and social support, which together are thought to be a measure of the level of daily negative microsocial exchanges, were expected to fluctuate more and were assessed at several points during the therapy. Each parent's expectations for the success or failure of therapy

were also assessed, as was satisfaction with therapy following its completion. The study attempts to address the relationships between the five sources of stress and positive or negative expectations for therapy, and between psychosocial stressors and engagement in therapy as measured by attendance at therapy sessions, completion of homework assignments, therapists' ratings of resistance, and satisfaction with therapy. In general it was predicted that families subject to higher levels of stress would be less engaged in therapy.

Hypothesis 1: The measures of psychosocial stress should be positively related to each other, but the relationships should be of only moderate magnitude. This reflects the assumption that multiple measures of stress are assessing more than one aspect of psychosocial adaptation. For example, chronic life stress, as measured by the occurrence of high-intensity events such as physical illness, unemployment, change in occupation, or change in residence, is hypothesized to represent a different dimension than daily hassles as measured by events such as disagreements between family members or transportation difficulties, though the two dimensions will certainly be positively associated.

Hypothesis 2: The measures of stress should be negatively related to expectations for a positive therapeutic outcome. Parents who report being more

depressed, having marital problems, experiencing more stressful life events, and having less social support will be less likely to expect a positive result from therapy.

Hypothesis 3: Expectations for therapy and measures of stress, particularly the repeated measures of daily hassles, should be related to the measures of engagement in therapy. Low expectations for therapy and high levels of daily hassles were expected to be the most powerful predictors of attendance, compliance with assignments, and therapists' ratings of resistance, but higher levels of depression and marital disruption were also expected to be related to lower engagement.

Hypothesis 4: Pre-therapy expectations and measures of stress were hypothesized to be related to post-therapy consumer satisfaction. Parents who entered therapy with high expectations for success and who were experiencing less disruption of their daily lives were expected to rate the parent training experience more positively following the end of therapy.

Hypothesis 5: Pre-therapy measures of psychosocial stress and expectations for therapy should significantly discriminate engaged families from non-engaged families. Families who attend fewer therapy sessions, complete fewer homework assignments, are rated as more resistant by therapists, and are less satisfied with therapy should be

characterized by lower pre-therapy expectations and higher levels of depression, marital disruption, and stress.

METHOD

Subjects

Subjects were all parents participating in an evaluation and treatment program called the Child Behavior Project during the 1984-85 academic year. The Child Behavior Project is a continuing service of the Michigan State University Psychological Clinic offering behavioral skills training to families with one or more children having an attention deficit disorder. Parent training groups teach parents child management skills, while groups for the children teach self-control and problem-solving strategies (Horn, Ialongo, Popovich, & Peradotto, in press; Horn, Ialongo, Greenberg, Packard, & Smith-Winberry, 1985).

Referrals were solicited through area pediatricians, schools, and mental health professionals, and through public service announcements on radio and television. In order to be included in the study a referred child had to meet the DSM-III criteria for Attention Deficit Disorder with Hyperactivity (American Psychiatric Association, 1980). The primary criteria for this diagnosis are presenting symptoms of inattention, impulse control, and hyperactivity, development of symptoms before age 7 years, and duration of at least 6 months. In addition, at least one parent had to rate the child two standard deviations above the mean on the Hyperactivity Index of the Conners Behavior Problem Checklist (Conners, 1973). If parent scores were

borderline, a child could be included if his or her classroom teacher assigned a rating of two standard deviations above the mean on the teacher form of the checklist. Only families in which the referred child was between the ages of 7 years, 0 months and 11 years, 6 months and was not in a classroom for mentally retarded or developmentally delayed children were accepted.

When a family called the clinic, an intake worker was assigned to contact the family by phone to explain the program. If the child was of the appropriate age and the parents were interested in pursuing treatment an intake evaluation was scheduled at the clinic. Ninety seven families with 100 children (two families referred sets of twins, and one referred a non-twin sibling pair) were scheduled for evaluations. Of these, 25 either cancelled their appointments or did not show for the appointments, and did not wish to reschedule, leaving 72 families which were actually evaluated. Of these nine met the criteria for inclusion in the program but decided after the evaluation that they did not wish to participate, seven did not meet the criteria of high Conners Hyperactivity score, and one was excluded because of a low score on the intellectual screening test (the Peabody Picture Vocabulary Test-Revised) used in the battery. Thus 56 families were included in the treatment program. In 12 of the families there was no father present in the home. In one case in which the

parents were separated the father agreed to provide pre-treatment data. There were no single-father families.

Procedures

Families were randomly assigned either to receive the combination of parent training and child self-control training or to receive no psychological treatment at all. Parents and children met in separate groups at the same times, for 12 weekly sessions, each lasting 90 minutes. There were five groups in all, with six families assigned to each group. Each group was assigned two therapists. Therapists were advanced graduate students in clinical psychology who specialized in work with children and families. In each pair of therapists there was at least one who had prior experience in conducting the parent training program. The behavioral parent training program consisted of teaching parents systematic ways to observe and modify their children's behavior through the use of techniques such as reinforcement, time out, and contingency contracting. The program is described in more detail in Appendix A.

Children in the study were also randomly assigned to receive either one of two doses of methylphenidate (.4 mg/kg/day or .8 mg/kg/day) or a placebo. Participation in the program was thus described by a 2 X 3 design: psychotherapy vs. no psychotherapy X low dose vs. high dose vs. placebo. There were 30 families in the psychotherapy + medication/placebo group, and 26 families in the

medication/placebo-only group. A double-blind design was used with regard to medication: neither the parents, the evaluating physician, nor the therapists knew whether a given child was receiving methylphenidate or placebo.

Prior to the beginning of treatment the families participated in extensive assessments, of which the measures used in this study were a part. These instruments, which are further described below, included a measure of depression, a measure of marital adjustment, measures of chronic and daily stress, and a measure describing the amount and type of social contacts the parent experienced. The same measures were administered at the post-treatment assessment. Parents assigned to the parent training groups also completed a measure of expectations for the success of therapy and repeated administrations of the same measures of daily stress and social support which were administered pre-treatment. At post-test all parents also completed a measure of their satisfaction with the treatment.

In addition to the the pencil and paper measures completed by the subjects, several other measures were employed. These included the number of groups the parent attended, the number of homework assignments completed, and ratings by therapists of the parents' behavior during the groups (see below).

In cases where two parents lived in the home every effort was made to obtain data from both parents, as well as

to engage both parents actively in the treatment.

Twenty-one of the thirty families in the parent training groups included fathers living in the home. In three such cases the father did not attend any of the parent training groups.

All measures included in the pre-treatment assessment were administered to both the parents in the parent training groups and parents in the medication-only condition. The medication-only parents were included only to increase the power in tests of association between measures prior to treatment. Thus, the pre-therapy measures were administered to a sample of 56 families, of which 44 had two parents living in the home. All measures during therapy were administered to 30 families, of which 21 had two parents living in the home.

Measures

Center for Epidemiological Studies Depression Scale (CES-D): The CES-D (Radloff, 1977) is a twenty-item scale intended to measure depressive symptomatology in the general population. In being designed for use in epidemiologic research it differs from previous measures of depression which have been used chiefly for the diagnosis of severe depressive disorders. While the emphasis of the CES-D is on affective symptomatology it also includes items intended to measure positive affect, somatic symptoms or retarded motor activity, and disturbances in interpersonal relationships.

The instrument was standardized on two probability samples, one in a large midwestern city and the other in a suburban county in Maryland. The total sample size was over 2500. The instrument was also administered to a sample of 70 depressed psychiatric patients. The CES-D was found to differentiate the depressed sample from the general population samples, and had moderate positive correlations with other self-report measures of depression and with clinicians' ratings of depression. Estimates of internal consistency ranged from .76 to .92 (the mean of these values, .84, was used in this study for purposes of correcting correlations for attenuation). Test-retest reliabilities with intervals ranging from two to eight weeks ranged from .51 to .67, while reliabilities with intervals from three to twelve months ranged from .32 to .54. The CES-D was administered at both the pre- and post-treatment assessments. Higher scores indicate greater depressive symptomatology.

Dyadic Adjustment Scale (DAS): The Dyadic Adjustment Scale (Spanier, 1976) is a 32-item inventory designed to assess satisfaction in marital or other intimate dyads. It is similar to the Locke-Wallace Marital Adjustment Scale, which was used in most of the research on parent training and marital satisfaction cited above. The DAS can be made to include the Locke-Wallace by the addition of four items, but was designed to be somewhat more modern in its wording.

The measure yields four subscale scores designated Dyadic Consensus, Dyadic Satisfaction, Dyadic Cohesion, and Affectional Expression, for which Spanier has published standardization data based on both married and divorced samples. The measure also yields a total summary score labeled Dyadic Adjustment. Because in the present sample the subscales were all highly correlated with the total, only the Dyadic Adjustment score was used in subsequent analyses. Spanier reported an internal consistency coefficient of .96 for this score. The DAS was administered at both the pre- and post-treatment assessments. Higher scores indicate better adjustment.

Life Events Questionnaire: The Life Events Questionnaire was modeled on the Social Readjustment Rating Scale (Holmes & Rahe, 1967) and consists of a list of 43 stressful life events. The respondent is asked to indicate whether each event occurred within the last six months or between six months and one year ago. The instrument is conceptualized as a measure of chronic stress. The respondent's score is simply the number of items checked. Since the Life Events Questionnaire was intended only as an index of major, long-term stress impinging on the family, it was administered only at the pre-treatment assessment. Higher scores indicate greater numbers of stressful events.

Family Crisis Checklist: The Family Crisis Checklist (Patterson, 1982a) is a list of 44 items which differs from

the Life Events Questionnaire in that the events are more likely to occur on a daily basis. It is conceived as a measure of the kind of lower intensity, higher frequency events which Patterson (1982a) and Lazarus (1984) have both referred to as "daily hassles". For each item the respondent is asked to indicate if the event occurred within the past week and, if it occurred, whether it had no effect, a slightly negative effect, or a very negative effect on him or her. Dishion (1983) presented an item analysis which broke the instrument down into different scales for fathers and mothers. He concluded that the checklist is best conceptualized as two-dimensional, with one scale reflecting stress from within the family (Family Disharmony) and another reflecting stress from outside the family (Daily Hassles). Estimates of reliability for the earlier scales ranged from .47 to .85 with a mean of .73.

Scoring of the scale was altered somewhat for the present investigation. Three scales were used, and the instrument was scored the same for both fathers and mothers. One scale, labeled Family Relations, contains 12 items and is similar to Dishion's (1983) Family Disharmony scale. A second, labeled Family Tasks, contains 11 items and is similar to the Daily Hassles measure. A third scale was scored using 8 items and was labeled Financial Stress. For each scale the score is the sum of the subject's responses. Twelve items were omitted from the scoring since they did

not seem to correlate meaningfully with any of the scales for the present sample. For each scale higher scores indicate greater amounts of stress perceived by the respondent.

The Family Crisis Checklist was intended as a measure of day-to-day stressful events which might affect the parent's willingness or ability to follow suggestions made by therapists. In order to obtain measures of stress in the family concurrent with the process of treatment the instrument was administered three times during the course of therapy, in addition to the pre- and post-treatment administrations. Parent group therapists distributed copies of the questionnaires at the end of the third, sixth, and ninth group meetings and asked the parents to complete and return them the following week. Parents who failed to return the questionnaire the following week were given another and made to complete it before leaving that meeting. Thus, the Family Crisis Checklist was administered a total of five times to parents in the parent training groups, and two times to the parents in the medication only group. For purposes of data analysis scores were averaged across all administrations to yield one Family Relations score, one Family Tasks score, and one Financial Stress score. Because parents occasionally did not attend groups for two or three weeks following the groups in which the instrument was administered some parents did not have scores for all five

administrations. In such cases all available scores were averaged. In the case of parents in the medication only group, of course, only two administrations were available to contribute to the overall score.

Insularity Questionnaire: The Insularity Questionnaire is an adaptation of items used by workers at the Oregon Social Learning Center (Dishion, personal communication, August, 1984). It is intended to measure the amount and quality of the respondent's interactions with other persons in the environment, and is based on Wahler's concept of insularity (Wahler et al., 1977). The respondent is asked how many contacts he or she had during the past week with friends, relatives not living in the home, co-workers (excluding contacts having to do with work), neighbors, and agencies or professionals (such as the welfare or unemployment offices, doctors, lawyers, social workers, or other mental health professionals). In addition, the respondent is asked what proportion of each kind of contact was positive/pleasant or negative/unpleasant (none, a few, about half, most, or all). Two scores are derived from the measure. One score, Number of Contacts, is simply the sum of all contacts listed. A high score indicates a larger number of contacts during the previous week. The second score, Negative:Positive, is the ratio of the mean response to the question "How many of these contacts were negative or unpleasant?" across all five types of contact to the mean

response to the question "How many of these contacts were positive or pleasant?" across all five types of contact. A higher score indicates a higher proportion of total contacts which are negative or unpleasant. The score was coded with negative contacts in the numerator because many subjects responded that they had no negative contacts, and no subjects responded that they had no positive contacts. Thus, division by zero was avoided by placing negative contacts in the numerator and dividing by the number of positive contacts.

The Insularity Questionnaire was administered at the same points as the Family Crisis Questionnaire, and the total scores were derived in the same way, that is by averaging all the scores available from the five administrations.

Pre-Therapy Expectations Questionnaire: The Pre-Therapy Expectations Questionnaire was adapted from one used by Robinson (1983), and is a 48-item scale measuring parents' expectations for the effects and quality of therapy. The respondent indicates his or her expectations for each item by rating them on a seven-point scale from 0 ("make much worse") to 6 ("improve greatly"). Three scores are derived, two of which were included in Robinson's original scale. One consists of 28 items asking about the expected effects of parent training on the child's behavior, and is labeled Expectations for Groups. A second,

consisting of six items, asks about the expected effects of parent training on the respondent's spouse, if any, and is labeled Expectations for Spouse. The third, which was added specifically for this study, consists of 14 items asking about the expected effects of medication on the child's behavior, and is labeled Expectations for Medication. Each score is obtained by summing the responses across items, with a higher score indicating expectations for a more positive outcome. Only parents in the parent training groups completed this measure, which was administered at the end of the first group session.

Attendance: Each parent in the parent training groups was assigned four attendance scores: one for the entire 12-week program, one for the first four groups, one for the middle four groups, and one for the final four groups. A parent's score for each period is simply the number of groups at which the parent was present during the period. Thus, a parent's score could range from 0 to 12 for the overall score, and from 0 to 4 for each of the three subscores. Attendance was divided into three periods because Patterson, Reid, and Chamberlain (1981) have speculated that parents' engagement in therapy may vary depending on the point at which engagement is assessed.

Homework: All parents were assigned homework during the course of parent training therapy. In most cases homework consisted of data collection on behavior change

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projects ("charting"). Parents were asked to record the occurrence of target behaviors, to record narrative reports of behavioral episodes, and to record the frequency of reinforcement, punishment or other interventions. Each family was assigned one homework score which, because mothers and fathers were supposed to work jointly in changing their child's behavior, was necessarily the same for both mother and father. The Homework score is simply the number of behavior charts turned into the therapists during the course of therapy. Because parents may have been attempting to intervene in multiple behaviors at one time, or may have been using multiple interventions to change the same target behavior, it was possible for more than one homework assignment to be completed each week.

Ratings of Resistance: The therapists in each group were asked to rate independently each parent on 12 items reflecting resistant or refractory behavior following each group meeting. Seven of the items are derived from clinical observations by Cole and Morrow (1976), and are designed to reflect an insensitive, authoritarian or coercive parenting style which is thought to be inconsistent with the goals of the parent training program. The remaining five items are adaptations of the molecular resistance codes developed by Chamberlain et al. (1984) and reflect the parent's behavior in response to the teaching efforts of the therapists. The therapists rate each item on a four-point scale from 0 ("not

at all) to 3 ("very much") according to how much the parent exhibited that behavior during the group meeting. The score for one meeting is the sum of the ratings for that meeting, with a higher score indicating more resistant behavior.

For the first three weeks of treatment both therapists rated all parents in their group. From the fourth week to the end of the training each family spent most of the group meetings in a small group with one primary therapist. Therefore only the primary therapist rated each parent from weeks 4 to 12. Each parent thus received up to 15 ratings. Four scores were computed which paralleled the four attendance scores: an overall score and scores for the first 4 groups, the second 4 groups and the final 4 groups. As was the case with Attendance, this was done because of the possibility that resistance might vary across the course of therapy. The scores were computed by averaging the parent's scores from all ratings for a given period. Obviously, parents were not given ratings when they were not present at a group. In cases where a parent was missing a rating because they had missed a group the mean of the available scores for the 12 sessions was substituted with the following restrictions: the substitution could only be made 3 times for the overall score (20% of the 15 potential ratings), twice for the score over the first 4 groups (28% of the 7 potential ratings), and once for the scores over the middle and final 4 groups (25% of the 4 potential

ratings in each period). Subjects missing more than the maximum number of scores for which the mean could be substituted for a given period were considered as missing the score for that period. Thus, different numbers of subjects are included in analyses of this measure for different time periods. This fact must be carefully considered when interpreting these analyses.

Consumer Satisfaction Questionnaire: The Consumer Satisfaction Questionnaire was adapted for use in the Child Behavior Project from one used by Forehand and McMahon(1981). The respondent rates each item on a seven-point scale, with the anchor points labeled differently depending on the wording of the question. Four scales were employed. Overall Satisfaction measures the extent to which the parent was satisfied with the outcome of therapy, and consists of 13 items. Usefulness measures how useful the parent thought the various techniques taught in the program were, and consists of 16 items. Ease of Use measures how difficult the parent thought the various techniques were to learn, and consists of 16 items. Leaders measures how likeable, skilled, and effective the parent group therapists were, and consists of 6 items. A higher score on Overall Satisfaction, Usefulness, and Leaders indicates greater satisfaction. A higher score on Ease of Use indicates less difficulty perceived by the parent in learning and using the techniques taught in therapy.

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In summary, the CES-D, DAS, Life Events Scale, Family Crisis Checklist, and Insularity Questionnaire were all independent, or predictor, variables. The Pre-Therapy Expectations Questionnaire was a dependent measure to be predicted by the other pre-therapy measures, but also served as a predictor variable in analyses of the measures collected during therapy and the Consumer Satisfaction Questionnaire. Attendance, Homework, the Ratings of Resistance, and the Consumer Satisfaction Questionnaire were all dependent variables to be predicted by the pre-therapy measures. The items included in each measure are listed in Appendix B.

RESULTS

Reliability of Measures

In order to assess the extent of measurement error in both independent and dependent measures and to be able to correct correlations between measures for attenuation due to that error reliabilities were calculated for all measures for which appropriate published estimates of reliability were not available. For the CES-D and DAS the published figures cited above were used. The number of stressful life events occurring during the previous year, of groups attended and of homework assignments completed, and the dose of medication received by the child, were taken as perfectly measured and assigned reliabilities of 1.00. For the other measures coefficient alpha was computed. Descriptive statistics for pre-therapy measures are shown in Table 1, for attendance in Table 2 and for resistance in Table 3. The complete matrices of correlations between all measures are included in Appendix C for mothers and Appendix D for fathers. The correlations for mothers are corrected for attenuation due to measurement error, while the uncorrected correlations are displayed for fathers.

For the three scores from the Pre-Therapy Expectations Questionnaire coefficient alpha was computed in the usual way, using scores on individual items. This procedure yielded alphas of .94 for the Expectations for Group score, .81 for Expectations for Spouse, and .94 for Expectations

Table 1

Means and Standard Deviations for Measures of Stress and Expectations for Therapy

<u>Variable</u>	<u>Mothers</u>						<u>Fathers</u>					
	<u>Pre</u>			<u>Post</u>			<u>Pre</u>			<u>Post</u>		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD
DAS	45	106.3	14.8	42	109.7	15.0	42	109.2	10.9	36	110.0	16.0
CESD	56	11.6	8.9	43	8.9	9.6	42	8.1	7.1	38	7.4	6.6

<u>Variable</u>	<u>Mothers</u>			<u>Fathers</u>		
	N	M	SD	N	M	SD
Life events	56	6.9	4.6	42	5.5	3.5
Expectations/Group	30	129.8	12.2	15	127.2	18.1
Expectations/Spouse	21	26.4	3.0	15	27.2	4.8
Expectations/Meds	30	62.5	9.5	15	63.8	9.5

<u>Variable^a</u>	<u>Mothers</u>		<u>Fathers</u>	
	M	SD	M	SD
Relational stress	7.2	4.7	4.9	4.1
Family tasks	6.2	3.1	3.8	3.7
Financial stress	4.7	3.9	3.8	3.2
Contacts/day	9.4	6.2	9.9	9.0
Neg:Pos contacts	.15	.22	.10	.15

^a. Based on all available measurements of stress variables, and varying according to whether or not subject received group treatment and with amount of missing data. For non-group subjects score is mean of pre- and post-test scores. For group subjects score is mean of up to five scores, including pre- and post- and up to three in-group administrations.

Table 2

Frequency of Group Attendance for Mothers and Fathers

<u>Overall</u>	<u>Mothers</u>		<u>Fathers</u>	
	N	%	N	%
0	0	0	3	14.3
1 to 3	0	0	6	28.6
4 to 6	6	20	0	0
7 to 9	5	16.6	8	38.1
<u>10 to 12</u>	<u>19</u>	<u>63.3</u>	<u>4</u>	<u>19</u>
Total	30	100	21	100
<u>First Third</u>	N	%	N	%
0	0	0	4	19
1 to 2	0	0	7	33.3
<u>3 to 4</u>	<u>30</u>	<u>100</u>	<u>10</u>	<u>47.6</u>
Total	30	100	21	100
<u>Second third</u>	N	%	N	%
0	1	3.3	6	28.6
1 to 2	6	20	6	28.6
<u>3 to 4</u>	<u>23</u>	<u>76.6</u>	<u>9</u>	<u>42.9</u>
Total	30	100	21	100
<u>Third third</u>	N	%	N	%
0	4	13.3	8	38.1
1 to 2	7	23.3	9	42.9
<u>3 to 4</u>	<u>19</u>	<u>63.3</u>	<u>4</u>	<u>19</u>
Total	30	100	21	100

Table 3

Means, Standard Deviations, and Medians for Therapist
Ratings of Resistance for Mothers and Fathers

	Mothers				Fathers			
	N	M	SD	Med.	N	M	SD	Med.
Overall	23	2.12	3.16	.615	9	.97	1.17	.467
First third	29	1.90	3.35	.425	13	1.80	3.93	.800
Second third	23	2.74	3.58	1.222	9	1.00	1.69	.458
Third third	19	2.78	4.46	.750	4	.69	.75	.500

Note. In order to have a resistance score for any period a subject must have had no more than 25% of the data for that period missing. Thus, for the overall score only those subjects attending at least 9 groups are assigned a resistance score, while for the subscores only those subjects attending at least three of four groups are assigned a resistance subscore.

for Medication. The same procedure was used for the Consumer Satisfaction Questionnaire, yielding reliabilities of .87 for Overall Satisfaction, .87 for Ease of Use, .85 for Useful and .81 for Leader.

For the Family Crisis Checklist, Insularity Questionnaire and Ratings of Resistance, which were administered at several points, a slightly different procedure was followed. For each scale derived from these measures a score was computed for each administration. These scores were then treated as items in the computation of coefficient alpha. Thus, for a scale such as Financial Stress, which was administered five times, five "items" were included in the computation of reliability. For the Family Crisis Checklist this procedure yielded reliabilities of .88 for Family Relations, .67 for Family Tasks, and .80 for Financial Stress. Reliabilities on the Insularity Questionnaire were .67 for Number of Contacts and .63 for Negative:Positive. On the Ratings of Resistance reliabilities were .96 for the overall score, .89 for the first four groups, .94 for the second four groups, and .92 for the final four groups.

Comparison of Groups

Because data from both the families receiving parent training and the families receiving only medication were used in computing correlations between the pre-therapy measures, the two groups were first compared on all

pre-therapy measures to see if differences existed. Mothers assigned to receive parent training had significantly lower scores on the Family Finances scale of the Family Crisis Checklist (mean of 4.0 versus a mean for medication only mothers of 6.8, $p < .05$). Mothers assigned to the medication only group had significantly lower scores on the Social Contacts scale of the Insularity Questionnaire (mean of 7.0 versus a mean for mothers in parent training of 11.5, $p < .05$). There were no other differences for mothers or for fathers.

Associations Between Measures of Stress

Uncorrected correlations between the various pre-treatment measures of psychosocial stress are displayed for fathers in Table 4 and for mothers in Table 5. For fathers it will be noted that most of the correlations are quite modest. Depression is consistently related to the measures of stressful events and to the number and character of social contacts, but not to marital adjustment. Other notable relationships are between the three scales of the Family Crisis Checklist. In general, however, the low to moderate relationships between the measures of stress justify their being treated as separate, but related, aspects of the subject's experience.

The results for mothers are similar. The scales of the Family Crisis Checklist cluster somewhat more strongly than

Table 4

Raw Correlations Between Measures of Psychosocial Stress for Fathers

	DAS	Life	CESD	Relations	Tasks	Finance	Contacts
Life	.081						
CESD	-.012	.337					
Relations	-.117	.157	.335				
Tasks	-.073	.143	.216	.520			
Finance	-.191	.222	.380	.473	.197		
Contacts	-.016	.220	.302	.200	.235	.276	
Neg:Pos	.124	.314	.430	.140	.314	.180	.247

Note. N = 42

Table 5

Correlations Corrected for Attenuation Due to Measurement Error Between Measures of Psychosocial Stress for Mothers

	DAS	Life	CESD	Relations	Tasks	Finance	Contacts
Life	-.275						
CESD	-.178	.177					
Relations	-.098	.373	.126				
Tasks	-.240	.333	.360	.509			
Finance	-.155	.402	.306	.433	.289		
Contacts	-.032	.291	-.071	.225	.127	.239	
Neg:Pos	.031	.068	.070	-.043	.254	.088	-.066

Note. N = 45 for correlations involving DAS, 56 for all others.

they do for fathers, and are also more strongly related to the measure of chronic life stress and less strongly related to the scores on the Insularity Questionnaire. The magnitudes of the correlations are not so strong as to demand that the measures of stress be combined, however.

Predictive Analyses

Because, as is shown in Table 2, only 12 of 21 fathers participated in more than half the parent training groups there is a great deal of missing data among the in-group measures for fathers. This substantially reduced the number of subjects available to be used in predictive analyses, and it was decided not to conduct any predictive analyses for fathers. The correlations between the predictor measures and Pre-therapy Expectations, Attendance and Consumer Satisfaction are presented in Table 6. The sample size is very small, and only one of the correlations, between Family Tasks and attendance in the first four therapy groups, reaches statistical significance. It is interesting to note the pattern of correlations between Family Relations and Family Tasks, and the dependent measures. It appears that fathers reporting more family stress had lower expectations for therapy, but actually attended more groups. However, a statistical test of the hypotheses for fathers must await larger samples. Table 7 displays the same correlations for mothers. The results of more extensive predictive analyses for mothers only will be presented below.

Table 6

Raw Correlations Between Predictor Measures and Pre-therapy Expectations, Attendance, and Consumer Satisfaction for Fathers.

Predictor	Expectations ^a			Attendance ^b			Satisfaction ^b			
	Group	Spouse	Meds	Overall	1	2	3	Overall	Ease	Useful Leaders
Med. Dose	.21	-.05	-.19	.13	.34	.13	-.01	-.12	.45	-.35
DAS	.29	-.09	.04	-.28	-.16	-.31	-.31	-.11	.18	-.36
Life Events	-.05	-.18	-.06	.11	.28	.12	-.12	-.47	.38	-.36
CES-D	-.29	-.12	.16	-.02	.06	-.04	-.05	-.33	-.21	-.04
Fam. Relations	-.34	-.28	-.23	.28	.28	.35	.14	-.36	-.07	.08
Fam. Tasks	-.26	-.40	-.24	.26	.46	.21	.15	-.30	-.04	.04
Finances	-.07	-.06	.07	.01	.03	.06	.04	-.26	-.26	-.24
Contacts	-.16	-.35	-.19	-.05	.03	-.08	-.08	-.26	.45	-.32
Pos:Neg	-.04	-.10	.09	.17	.36	.03	.05	-.13	-.11	-.01
Group Expectations				-.30	.04	-.31	-.41	-.13	.03	-.24
Spouse Expectations				-.20	-.10	-.23	-.22	.02	-.14	-.12
Med. Expectations				-.31	-.10	-.34	-.31	-.01	-.53	.25

^a. N = 15. Coefficients greater than .514 are significant at the .05 level, two-tailed.

^b. N = 20, except for correlations with expectations variables. Coefficients greater than .444 are significant at the .05 level, two-tailed.

Table 7

Correlations Corrected for Attenuation Due to Measurement Error Between Predictor Measures and Pre-therapy Expectations, Attendance, and Consumer Satisfaction for Mothers.

Predictor	Expectations ^a			Attendance ^b			Satisfaction ^b				
	Group	Spouse	Meds	Overall	1	2	3	Overall	Ease	Useful	Leaders
Med. Dose	-.17	.26	-.17	-.33	-.36	-.26	-.27	-.07	.07	.06	-.08
DAS	-.01	-.08	-.37	.26	.10	-.18	.35	.21	-.19	.24	-.05
Life Events	.01	.10	.28	-.17	-.08	.01	-.22	-.17	.04	-.05	.18
CES-D	.30	.19	.43	-.46	.22	-.29	-.62	-.55	-.54	-.55	-.69
Fam. Relations	.13	.19	.08	.21	.01	.26	.10	-.02	.14	.18	-.15
Fam. Tasks	.28	.30	.41	.01	.25	.25	-.12	-.25	.26	-.23	-.29
Finances	.09	.22	.30	-.60	.07	-.69	-.48	-.43	-.22	-.41	-.30
Contacts	-.07	.32	.18	-.07	-.25	.09	-.08	.50	-.13	.43	.46
Pos:Neg	.11	.05	.16	-.15	.14	-.16	-.21	-.48	.07	-.40	-.41
Group Expectations				.15	.00	.13	.11	.13	.14	.25	.02
Spouse Expectations				-.04	-.25	-.08	.16	.10	.33	.19	.01
Med. Expectations				-.10	.06	.01	-.19	.07	.11	.05	-.03

Note. N = 30 for all variables except Spouse Expectations. Coefficients greater than .36 would be significant at the .05 level, two-tailed. For Spouse Expectations N = 21. Coefficients greater than .43 would be significant at the .05 level, two-tailed.

In the original set of stepwise regression analyses Medication Dose was entered on the first step, followed by the entry of the psychosocial stress variables in stepwise fashion according to statistical criteria. This was done in order to determine the effects of the psychosocial variables above and beyond this extraneous variable. When the data were analyzed in this fashion, however, there was only one instance in which Medication Dose was significantly correlated with the dependent variable on that first step, and in that case no other variables entered the equation. There were thus no cases in which Medication Dose accounted for a significant proportion of variance, and in which other predictors added to the accuracy of prediction. In order to make interpretation of effects easier and more direct, the analyses were re-run with Medication Dose allowed to enter in a stepwise fashion in the same manner as the other predictors (Note 1).

In addition, there were no instances in which DAS score made any significant contribution to prediction of a dependent variable. Since excluding DAS would increase the total degrees of freedom by almost one-third (9 out of 30 mothers had no spouse) all analyses were re-run without DAS as a predictor variable in order to increase statistical power. It is these analyses which are presented below. In all analyses correlations corrected for attenuation due to measurement error are used. Predictors were included in the

equation if they met the criteria for statistical significance and resulted in an increase of at least 3% over the variance accounted for by predictor variables already in the equation. For each analysis multiple R , R^2 adjusted for the number of predictor variables, and standardized regression coefficients or beta weights, along with the appropriate significance tests, are presented.

Pre-Therapy Expectations. Only one of the Pre-Therapy Expectations scales was significantly predicted by any of the pre-therapy measures. Expectations for Medication was significantly related to CES-D score, $R = .43$, adjusted $R^2 = .154$, $F(1, 28) = 6.28$, $p < .05$. The beta weight for CES-D was .428, indicating that mothers who were more depressed had higher expectations for the efficacy of medication in treating their children's behavior problems. Thus, the hypothesis that mothers experiencing more stress would have lower expectations for the parent training program was not supported. However, more depressed mothers did have greater expectations for the non-psychological component of the intervention.

Attendance. Stepwise regression analyses were run to predict both Overall Attendance, and attendance during each of the three thirds of the treatment program. The results are presented in Table 8. Mothers' Overall Attendance was positively associated with stress in Family Relations, and negatively associated with Financial Stress and depression.

Table 8**Regression Analyses on Attendance at Therapy Sessions by Mothers****Overall:**

$R = .91$, $\text{Adj. } R^2 = .800$, $F(4,25) = 29.9$, $p < .001$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Financial stress	-.922	-8.74	< .001	.337
Relational stress	.711	7.30	< .001	.366
Depression	-.334	-3.48	< .01	.043
Expectations for med.	.266	2.84	< .01	.054

First third:

$R = .36$, $\text{Adj. } R^2 = .101$, $F(1,28) = 4.27$, $p < .05$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Medication dose	-.364	-2.06	< .05	.101

Second third:

$R = .695$, $\text{Adj. } R^2 = .464$, $F(1,28) = 26.16$, $p < .001$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Financial stress	-.695	-5.11	< .001	.464

Final third:

$R = .696$, $\text{Adj. } R^2 = .446$, $F(2,27) = 12.66$, $p < .001$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Depression	-.720	-4.97	< .001	.363
Expectations for groups	.330	2.27	< .05	.082

Expectations for Medication also had a positive beta weight despite the fact that its zero-order correlation with Overall Attendance was negligible. Thus, it is apparently an example of suppression (Cohen & Cohen, 1983). The positive beta weight more accurately reflects the influence of this variable when the other predictors are taken into account.

Attendance during the first four sessions was negatively associated with the dose of medication received by the child. Mothers whose children received higher doses of medication attended fewer groups during the early part of treatment. Attendance during the second third of treatment was negatively associated with Financial Stress. Attendance during the later part of treatment was negatively associated with maternal depression and positively associated with Expectations for Groups. With the exception of the positive relationship between Family Relations and Overall Attendance these results generally offer tentative support for the hypothesis that attendance at therapy meetings would be lower in the presence of high levels of stress, but higher when parents held higher expectations for therapy.

Therapist Ratings of Resistance. As with attendance regression analyses were conducted to predict both Overall Resistance and the three resistance subscores. The results are presented in Table 9. Recall that, because parents who attended fewer groups during a given period may be missing

the resistance score for that period, the analyses of resistance scores during the three periods of therapy are based on somewhat different groups of subjects. Therefore these results should not be taken as demonstrating any behavioral process which influences resistance differentially across time.

Overall Resistance was significantly predicted only by Expectations for Groups. Mothers who reported higher pre-therapy expectations for the success of the intervention were described by therapists as less resistant during treatment. Resistance during the first third of treatment was not significantly predicted by any of the stress measures. Resistance during the middle part of therapy was also negatively associated with Expectations for Groups. Resistance during the final third of treatment was very strongly predicted by Expectations for Groups and Expectations for Medication, as well as by several other predictors. Expectations for Medication seems to be a suppressor variable, as it's high positive beta weight is opposite in sign from its low, negative zero-order correlation with the criterion. This suggests that the high correlation between Expectations for Medication and Expectations for Groups masks the true relationship between the two predictors and the criterion when only zero-order correlations are considered. The extremely high amount of variance accounted for in this dependent variable, as well

Table 9

Regression Analyses on Therapist Ratings of Resistance for Mothers

Overall:

R = .490, Adj. R² = .204, F(2,21) = 6.65, p < .05

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Expectations for groups	-.490	-2.58	< .05	.204

Second third:

R = .481, Adj. R² = .195, F(1,21) = 6.33, p < .05

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Expectations for groups	-.481	-2.52	< .05	.195

Final third:

R = .973, Adj. R² = .926, F(5,13) = 45.81, p < .001

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Expectations for groups	-1.567	-25.99	< .001	.256
Expectations for med.	1.414	21.78	< .001	.178
Financial stress	-.472	-10.78	< .001	.211
Neg:Pos contacts	-.354	-10.73	< .001	.163
Chronic stress	-.432	-10.70	< .001	.118

as the low degrees of freedom suggest that this particular result should be interpreted with the utmost caution. Nonetheless the results suggest that the pre-therapy measures may be strongly related to resistant behavior near the end of this time-limited treatment.

Homework Completion. The number of homework assignments completed by mothers was not significantly predicted by any of the set of pre-therapy measures.

Consumer Satisfaction. The results of the stepwise regression analyses for the Consumer Satisfaction scales are presented in Table 10. All four scales were very strongly predicted by the set of predictor variables. Again, because of the small sample size and the very high proportion of variance accounted for in Overall Satisfaction, Usefulness, and Leaders, these results should be interpreted with caution. However, while the size of the effect is startling, it can be seen that in general the results are as predicted. Mothers who were more depressed, who were under greater stress, and who reported less social support were less satisfied with treatment, found it more difficult and less useful, and were less positive about the therapists than less stressed mothers. However, it should again be noted, that several predictors seem to function as suppressor variables, with beta weights larger than, or opposite in sign to, their zero-order correlations with the criterion variable. The beta weights more accurately

Table 10

Regression Analyses on Consumer Satisfaction for Mothers

Overall:

$R = .971$, $\text{Adj. } R^2 = .931$, $F(5,23) = 76.34$, $p < .001$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Depression	-.544	-14.90	< .001	.280
Social contacts	.584	19.30	< .001	.187
Financial stress	-.460	-14.37	< .001	.208
Neg:Pos contacts	.432	-14.72	< .001	.112
Expectations for groups	.389	13.89	< .001	.144

Ease of Use:

$R = .775$, $\text{Adj. } R^2 = .553$, $F(3,25) = 12.55$, $p < .001$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Depression	-.738	-5.41	< .001	.261
Financial stress	.693	4.40	< .001	.189
Relational stress	-.389	-2.64	< .05	.102

Usefulness:

$R = .950$, $\text{Adj. } R^2 = .882$, $F(5,23) = 42.73$, $p < .001$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Depression	-.551	-7.11	< .001	.275
Expectations for groups	.554	7.85	< .001	.175
Social contacts	.582	8.19	< .001	.159
Financial stress	-.467	-6.13	< .001	.167
Medication dose	.325	4.74	< .001	.106

Leaders:

$R = .989$, $\text{Adj. } R^2 = .971$, $F(6,22) = 158.85$, $p < .001$

<u>Predictor variable</u>	<u>Beta</u>	<u>t</u>	<u>p</u>	<u>R² change</u>
Depression	-.896	-22.07	< .001	.456
Social contacts	.417	12.02	< .001	.146
Neg:Pos contacts	-.612	-14.93	< .001	.095
Expectations for groups	.289	8.45	< .001	.081
Relational stress	-.661	-12.74	< .001	.063
Family task stress	.656	10.28	< .001	.131

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reflect the true effects of the predictors on the criterion, effects which are hidden by the correlations between predictors when only zero-order correlations are considered (Cohen & Cohen, 1983). It must be remembered, however, that these effects may be apparent only when the group of predictors is considered as a group, and may not obtain when a given predictor is considered in isolation.

Predicting Response to Therapy

In order to determine if maternal response to therapy could be predicted mothers were classified as "engaged" or "non-engaged" according to four criteria. If a mother met two or more of these criteria she was classified as non-engaged. The criteria were as follows:

Absence from three or more therapy sessions. Absence from three or more group meetings would mean that a parent had missed at least a quarter of the treatment program. In discussions with the clinical staff of the project it was deemed that 10 of 12 was the minimum number of therapy sessions a parent could attend and still receive adequate instruction in the techniques being taught. This decision was the result of clinical judgement, and no attempt has been made to provide empirical validation for it.

Average resistance rating of 2.0 or more per group.

Though the mean rating per group for mothers was 2.12, the median was .615. The distribution was extremely

skewed, with the vast majority of mothers having mean scores near zero and a few mothers obtaining much higher scores. A score of 2.00 or more was judged deviant enough to be called "resistant".

Less than 10 homework assignments completed. A Homework score of 10 would indicate an average of one behavioral chart completed for each week in which parents were supposed to be working on home projects. Less than this was deemed inadequate compliance with therapist directives.

Overall Satisfaction score of less than 52. An Overall Satisfaction Score of 52 would be one standard deviation below the mean score for mothers. Mothers below this level were deemed to be, in a practical sense, significantly dissatisfied with the treatment program.

Use of these criteria resulted in 18 mothers being classified as engaged and 12 being classified as non-engaged.

The results of the stepwise discriminant analysis are presented in Table 11. A discriminant function was obtained which correctly classified 83% of the cases. Three predictor variables were included in the function. Medication dose and CES-D score were positively related to non-engaged status, while the level of stress related to family tasks was negatively associated with non-engaged

Table 11

Summary of stepwise discriminant function analysis for mothers

Wilk's Lambda : .6135
 Chi-square (3 df) : 12.946, $p < .01$

Step	Variable entered	Standardized coefficient
1	Medication dose	.587
2	Depression	1.104
3	Family tasks	-.766

Classification results

<u>Actual group</u>	<u>N</u>	<u>Predicted group membership</u>	
		<u>Engaged</u>	<u>Non-engaged</u>
Engaged	18	14 (77.8%)	4 (22.2%)
Non-engaged	12	1 (8.3%)	11 (91.7%)

Percent of cases correctly classified: 83.33

status. Thus, mothers who were depressed and whose children were on higher doses of medication were more likely to be classified as non-engaged, while mothers reporting high levels of stress related to family tasks were more likely to be classified as engaged. Of the misclassified cases only one was a "false negative", with a non-engaged mother being classified as engaged. Four engaged mothers were classified as non-engaged.

DISCUSSION

The results of this study offer support for the notion that stress and its effects on parental adjustment have important implications for the process of behavioral parent training, at least for mothers. Mothers' reports of stressful events, depression, number and character of social contacts, and expectations for therapy were useful, in varying combinations, in predicting attendance at therapy sessions, therapist ratings of the parent's resistant behavior, and the mothers' level of satisfaction with therapy following its completion. Furthermore, a combination of depression, stress due to family management tasks, and the dose of medication received by the child discriminated mothers who became engaged in therapy from those who did not with over 80% accuracy. Of the measures of engagement in therapy, only homework completion was not significantly related to any of the predictor variables. One important goal of this study was to include fathers in data collection to an extent usually not seen in the parent training literature. The fact that fathers participated at such a low rate that statistical analyses were impractical is in itself important information.

The results for the Pre-Therapy Expectations Questionnaire offer little support for the hypothesis that mothers under stress would expect less positive outcome from therapy. Only the Expectations for Medication scale was

significantly predicted, and only by depression. This finding is notable, however, in that mothers who were more depressed expected more positive results from medication. These mothers may have been looking for a "quick fix" that would relieve them from the need to benefit from the behavioral component of the program, but may have still felt that therapy would work if they had to go through with it. Overall, however, mothers had positive expectations for therapy. When the scores on the scales are converted to mean item responses they fall between "improve somewhat" and "improve moderately" on all three scales.

Certainly a minimum requirement for a family to benefit from any kind of psychotherapy is attendance at therapy sessions. A major portion of the variance in overall attendance for mothers was accounted for by two scales of the Family Crisis Checklist: Financial Stress and Family Relations, with depression and Expectations for Medication accounting for smaller amounts of variance. Mothers who reported more stressful events related to the management of family finances attended fewer therapy sessions across the course of therapy, while mothers reporting more stress related to conflicts between family members (not only involving the child) were more likely to attend therapy sessions. The latter finding is contrary to the hypothesis that higher stress would result in lower attendance regardless of the nature of the stressful events. The most likely

interpretation of these results is that families experiencing more financial stress were less able to attend to the problems involved in learning to manage the child's behavior, and as such attending therapy became a lower priority for them. They may have felt that therapy did not address the factors which were really causing the family's problems. For families with high levels of aversive interchanges between family members, however, learning to manage the child's behavior may have been seen as a more appropriate way of achieving relief from these coercive interactions. The finding that maternal depression resulted in fewer sessions attended is in keeping with the hypothesis that depressed mothers would become less engaged in therapy. These mothers also may have felt that therapy was not addressing their "real problems", or they may have been unable to mobilize the energy to get to the sessions and become involved in a program that demanded large amounts of time and work from parents. Expectations for Medication seems to have acted as a suppressor variable, enhancing prediction of attendance even though the zero-order correlation between the two is negligible.

The findings regarding attendance during the beginning, middle, and final periods of therapy are less definitive. That the amount of medication received by the child (to which the parents were blind) had a small negative effect on attendance in the first four sessions may be due to the

behavioral effects of the medication. Mothers may have seen positive changes in the child's behavior very early and felt a less urgent need to deal with the child in a "psychological" way. In general, however, there was little variance in attendance during the first four groups, with all mothers attending either three or four sessions. Financial stress seems to have had its major effect during the second third of therapy, while depression and high expectations for the efficacy of the parent groups influenced attendance during the final four groups. More depressed mothers attended fewer sessions near the end of therapy, while mothers with high expectations for success attended more. Both findings support the hypotheses that stress and depression would reduce engagement in therapy, while positive expectations would increase it.

Expectations for Groups also had a significant effect on therapist ratings of resistant behavior, with other variables entering the predictive equation only during the final third of therapy. Expectations for Groups alone accounted for approximately 20% of the variance in resistance overall and in the middle third of therapy. Because of the very high proportion of variance accounted for in the final third of therapy, and because of decreasing degrees of freedom due to fewer mothers attending enough sessions in which they could receive resistance ratings, the findings in the final period must be interpreted with

extreme caution, and are probably best thought of as providing a somewhat empirical base for speculation. Expectations for Groups continues to be related to lower resistance, as predicted. The finding that higher Expectations for Medication scores predicted higher levels of resistance seems to be a result of suppression, since it actually has a small negative zero-order correlation with this criterion. Thus, this relationship is hidden by the correlation between Expectations for Medication and Expectations for Groups unless the two are both considered as predictors. However, the final three variables to enter the regression equation, Financial Stress, Negative:Positive Social Contacts, and Life Events or chronic stress, were all related to lower resistance, exactly the opposite of what was predicted. It may be that mothers under high levels of stress were quiet and uninvolved during therapy sessions and were not rated as resistant, or it may be that these mothers were cooperative during therapy sessions because they saw therapy as the only possible relief for family disruption. A true test of the hypothesis regarding resistance awaits a larger sample, however. Again, it is important to note that, since fewer mothers attended therapy as the program progressed, the resistance analyses are based on different groups of subjects at the different points. Thus these analyses are not thought to represent changing influences on resistance across time, but simply to reflect the effects of

stress and adjustment on resistance at any given point for the mothers attending therapy at that point.

The most striking findings in this study are probably those on mothers' consumer satisfaction. All four scales, Overall Satisfaction, Ease of Use, Usefulness, and Leaders, were very well predicted by the set of predictor variables. Again, because of the very high amounts of variance accounted for and the small sample size (though there is not as much missing data as in the analyses of resistance) these results must be very cautiously interpreted. However, the findings are almost without exception supportive of the hypothesis that higher levels of stress would lead to lower satisfaction with therapy, while more positive expectations would lead to higher satisfaction. Because the four scales of the Consumer Satisfaction Questionnaire are highly correlated the findings are very similar. Overall Satisfaction was lower for more depressed mothers, and for mothers reporting fewer social contacts, more financial stress, a higher ratio of negative to positive social contacts, and lower expectations for the success of the therapy groups. The results were very similar for the other scales and may reflect the fact that mothers who report more disruption in their lives and less social support in dealing with it may not have felt that this therapy, which was exclusively concerned with teaching behavioral techniques for managing child behavior, dealt adequately with the kinds

of distress they were experiencing. For mothers who experienced less disruption other than that caused by the child's behavior problems the therapy would have addressed their concerns more completely.

There are several other relationships worth comment in the analyses on consumer satisfaction, all having to do with suppression effects. In each case the beta weights of the predictors were either much larger than or opposite in sign from their zero-order correlations with the criterion. This suggests that their true relationships with the criterion are hidden by relationships with other variables, until the different predictors are considered in combination, as in these multiple regression analyses. One such finding is that Financial Stress was positively related to ratings of Ease of Use. This is counter to what would be predicted by the hypothesis that compliance with therapy would be more difficult for families experiencing distress which could not be dealt with in behavioral parent training. This finding is not easily explained. It is also notable that the dose of medication received by the child was positively related to mothers' ratings of the usefulness of the therapy. Certainly if parents perceived positive behavioral effects of medication they may have attributed it to their efforts in the parent training program. Alternatively it may be that the higher dose of methylphenidate, which according to Barkley (1981) is probably a "modal" dose relative to what

is prescribed by many physicians, was indeed an optimum dose for making the child amenable to behavioral interventions on the part of the parents. Finally, mothers reporting higher levels of stress due to family management tasks rated the therapists as more competent and likeable. This was another unexpected finding, and it may reflect a feeling on the part of the mothers that the therapists were helpful in teaching them to deal with these tasks.

One hypothesized measure of engagement in therapy, homework completion, was not significantly predicted by the measures of stress or pre-therapy expectations. This was considered an important part of the hypothesized process relating stress to poor outcome in parent training. If parents under stress are not using the techniques taught in therapy then no change in the child's behavior should occur. In this study, however, there was no support for this link between stress and outcome. Given the positive findings on attendance it is even more surprising that no significant relationships with homework completion were found, since parents that did not attend could not turn in homework assignments. Remember, however, that the measure of use of parenting techniques was a relatively gross one, the turning in to the therapists of behavioral charts completed during the week. It may be that even parents who attended therapy sessions regularly did not turn in homework, and some parents may have even successfully used the techniques of

contingency management without providing the records the therapists requested. Other parents may have produced charts, but not actively engaged in parenting behaviors aimed at altering child behavior. In future research better measures are needed of the extent to which parents comply with therapists directives in attempting to implement behavioral management techniques in the home.

When the four variables hypothesized to measure engagement in therapy were combined to classify mothers as engaged or non-engaged three predictors entered into a function which effectively discriminated the two groups. Higher scores on depression were related to non-engaged status, a finding consistent with the results of the regression analyses on individual dependent measures. Stress due to family management tasks were related to engaged status, again suggesting that mothers felt that the behavioral parent training was effectively addressing their problems with family management. Somewhat surprisingly, medication dose also entered into the discriminant function, and was positively related to non-engaged status. This is consistent with the small effect which medication dose had on attendance during the first four groups. Medication dose was also the only predictor variable to have a statistically significant correlation with homework completion ($-.38$). Again, it may be that mothers who perceived medication as effective saw less need to attend or do homework for the

therapy sessions, feeling that medication alone was a sufficient intervention. The effects of medication were not a major focus of this study, and it was included among the predictor variables mainly to control for any "extraneous" effects it might have. The finding that medicating children may have significant effects on the participation of parents in a behavioral intervention is a serendipitous one, and clearly requires further research.

The extent to which fathers were uninvolved in the parent training program, though it was not analyzed statistically, is worth comment. While 19 of 30 mothers (63%) attended 10 or more of the 12 parent groups, only 4 of 21 fathers (19%) did so. Even early in the program less than half of the fathers attended 3 of the first 4 groups, while all of the mothers did so. In examining the correlations between independent and dependent variables for fathers, the CES-D, and the Family Relations and Family Tasks scales of the Family Crisis Checklist appear to be moderately related to expectations for therapy and attendance, though because of the small sample the relationships are not statistically significant. Fathers who were more depressed, and who reported more stress in family relationships and task management had lower expectations for the efficacy of therapy, and were less satisfied with therapy overall. The best predictors of Overall Attendance for fathers were Family Relations and

Family Tasks, marital satisfaction, and pre-therapy expectations for the groups and for medication. Interestingly, all the relationships are in the opposite direction from that predicted. Fathers reporting more stress attended more groups, while fathers reporting higher marital satisfaction and higher pre-therapy expectations attended fewer groups. Clearly the fact that fathers participated in therapy less than mothers did warrants further study, and the pattern of correlations just noted may offer some small encouragement that relationships similar to those obtained for mothers may hold true for fathers as well.

In general, the results of the regression analyses on mothers' attendance, resistant behavior, and consumer satisfaction offer some support for the hypothesis that stress, parental adjustment and expectations for therapy would be related to engagement in behavioral parent training. Of particular importance were maternal depression, stressful relationships between family members, and financial stresses upon the family. Major life events, social support, and stressful events related to family task management were less frequently and less strongly related to the criterion variables. Marital adjustment did not prove useful in predicting measures of engagement, but there were only 21 mothers in the sample with husbands or other males

in the home, and the importance of this aspect of adjustment must be regarded as not adequately tested.

Forehand, Furey, and McMahon (1984; cited in Middlebrook and Forehand, 1985) report high correlations between marital adjustment, depression, and anxiety and propose that these variables may be combined into one construct, which they label distress. In the present sample depression, major life events, and "daily hassles" were all interrelated for both mothers and fathers. Marital adjustment was less strongly related to other measures of stress. Middlebrook and Forehand (1985) suggest that stress may be the most useful construct in assessing mothers of problem children. This is consistent with research by Forehand and Furey (1985) demonstrating relationships between different classes of stressful events and mothers' moods. As Middlebrook and Forehand note, stressful events can be measured in terms of behavior, and therefore may be thought of as more objectively measured, and potentially measured by a greater variety of methods, than more traditional measures of marital adjustment or depression.

Another measure intended to be based more on reports of behavior, which in this sample proved less useful in predicting criterion variables, was the Insularity Questionnaire. The two scores derived from this instrument, Number of Social Contacts, and Ratio of Negative:Positive Contacts, were only gross marker variables for behavioral

events, and may not have assessed these events adequately. In addition, it appeared that many parents had trouble understanding the mechanics involved in marking the questionnaire, and this poor design may have reduced its effectiveness. In any case, measures of social support did not emerge in this study as a major determinant of parents' engagement in therapy.

In general, this study serves as a first step in asking whether the level of distress in a family, which previous research has related to perceptions of child deviance and to outcome in behavioral parent training, is also related to process variables such as failure to attend therapy sessions, resistant behavior during therapy, and satisfaction with therapy. The data presented here suggest that it is. These findings both extend and are consistent with earlier results in the field. Christensen et al. (1983), for instance, found that depression was negatively related to advocacy of a positive approach to child behavior problems, and that advocacy of a positive approach was negatively associated with advocacy of behavioral solutions. In effect, parents perceived the use of behavioral methods as meaning punishment, with more distressed parents favoring punishment over approaches such as positive reinforcement of desirable child behavior. This effect could lead to what would be called "resistant" behavior in this study, as parents resist therapists efforts to teach positive

behavioral methods. Similarly, the finding that insular mothers fail to employ different consequences for prosocial and deviant behavior (Dumas & Wahler, in press) is consistent with the present finding that stress and the nature of social contacts may be associated with increased resistance late in therapy. Finally, Wahler and Graves (1983) state that setting events which may seem irrelevant to the clinical observer may exert powerful stimulus control over pathological interactions between parent and child. Failure to address these non-contingent, but functional, relationships may result not only in failure to change parent and child behavior, but in the parent's being dissatisfied with the outcome of therapy. In this study it is exactly those mothers who report the most stress and the highest rates of negative social interactions who also report being the least satisfied with therapy.

Blechman (1981) has noted that the population served by those doing behavioral family therapy is a heterogeneous one, and proposes an algorithm for determining the exact type of intervention suited to a particular family's needs. A series of relatively objective questions may be used to assess the family's current behavior and priorities in a way that is dependent not on global variables such as socioeconomic status, but on the behavioral processes for which global indicators are marker variables. Similarly, Belsky (1984) recommends assessment of parental functioning

by considering three domains. The first is parental personality and psychological well-being, such as measures of depression, and reports of stressful microsocial events employed in this study. The second is contextual subsystems of support, such as the marital relationship or the parent's social network as reported by measures such as the Insularity Questionnaire. Finally, Belsky considers child characteristics which, while they were assessed as part of the clinical program, were not analyzed as part of this study, such as intellectual functioning, temperament, or observations of child behavior. Each of these subsystems may be assessed as providing the parent with various degrees of support or stress. The more the total system is characterized by support, the greater the adequacy of parental functioning. The more the balance of these factors is toward stress, the greater the risk for dysfunctional parenting. The present study would suggest that the same relationships hold in assessing the potential difficulty in engaging a particular family in behavioral parent training.

Patterson and Forgatch (1985) note another set of variables important to the process of behavioral therapy which was not assessed in this study: therapist characteristics. They present data supporting the hypothesis that certain therapist behaviors are causally related to resistant behaviors on the part of the parents during therapy sessions. Parental noncompliance was

significantly related to therapist efforts to teach and confront, while the likelihood of parental compliance was increased by supportive or facilitative statements on the part of the therapist. They also hypothesize that parent behavior can alter therapist behavior. Noncompliant families may actually teach therapists to reduce efforts to teach parenting skills and to forcefully pursue increasingly difficult cases. Thus, failure to become engaged in therapy may be related to two sets of determinants. The first is the personal and social factors which the parent brings to treatment, and which have been the focus of this investigation. The second, which Patterson and Forgatch hypothesize to be especially important during the middle and late part of treatment, is therapist behaviors.

The greatest limitation of this study is, of course, the small sample size. Because of the small number of families treated the findings on mothers must be seen as tentative, while the data on fathers provides nothing more than a meager base for speculation. The greatest need for future research clearly is to increase the empirical base which this study has only begun to build. The measures employed in this research were fairly global, depending on parental report, the ratings of therapists, and a gross measure of homework completion. Furthermore, the measures of depression, marital adjustment, and stress were taken at points temporally distant from the measures they were used

to predict. Future work should include refinements in the technique employed to relate distress to engagement. In particular it would be useful to assess the direct relationship between stressful microsocial exchanges and parent behavior during therapy. This might be done using a single subject design in which parents report on stressful events weekly, and these reports are correlated with actual observations of behavior in therapy. Another important question concerns the relationship between observed therapist and parent behavior, and therapist ratings of parent resistance, or between behavior in therapy and parent ratings of satisfaction with therapist and therapy.

Though tentative, the present findings represent the beginning of an important course of inquiry. Heretofore there has been much research addressing the efficacy of behavioral parent training and factors affecting its outcome, but little which examines the actual process of changing parent behavior, which is the immediate goal in trying to teach parents to change their children's behavior. This process is a marvelously complex one, and it is time that researchers began to examine it more closely.

Note

1. It should be noted that, as this study was originally conceived, Medication Dose was an extraneous variable, and was included only to control for "nuisance" effects. This variable was not hypothesized to have any particular effects on the phenomena under study. The change in method of analysis did not alter the findings with regard to Medication Dose, but was felt to make the effects of other predictor variables easier to interpret, since it eliminated the small, nonsignificant proportions of variance in the dependent variables for which Medication Dose accounted when it was forced to enter on the first step. That Medication Dose was serendipitously found to have some very interesting effects on some dependent variables is a measure of the complexity of influences on parents' behavior in therapy.

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APPENDICES

APPENDIX A

APPENDIX A

Summary of Behavioral Parent Training Program.

Week 1: Introduction to group format and rationale.

Summary of mechanics, including meeting times, fees, confidentiality, and medication procedures. Basic content of groups described, along with rationale for treating hyperactive children in this way. The emphasis is on building parenting skills.

Week 2: Introduction to behavioral/learning theory methods.

Includes discussion of how temperament and other developmental factors influence parent-child interaction. Concepts discussed include positive reinforcement, negative reinforcement, punishment, and observational learning.

Week 3: Systematic observation of child behavior. Parents are taught to select and define a target behavior. Global behavioral descriptions are reduced to specific behaviors to be observed. Parents are asked to observe the therapist's behavior for a few minutes, and results are compared. The use of charts to record child behavior is discussed.

Parents define child behaviors to chart over the next week.

Week 4: Paying attention to desirable child behavior. The use of social attention to increase positive child behavior is discussed. Parents and therapists define positive behaviors which can be monitored, and identify specific interactional situations in which these behaviors are likely to occur. The use of specific, labeled praise is taught. The previous week's homework is also discussed.

Week 5: Enhancing parental attending skills. Parents are taught a technique called "Special Time", in which parent and child spend 5 to 10 minutes each day in an interaction which is structured so that almost any child behavior is appropriate. This offers an opportunity for the parent to practice the use of positive social attention. A series of videotaped scenes is used as a teaching aid. The previous week's homework assignment is discussed.

Week 6: Responses to negative or undesirable child behavior. Parents are taught to identify behaviors that may be extinguished through ignoring. Other behaviors require the use of punishing techniques. These may include the natural consequences of the behavior, but also include response cost and

over-correction. Specific means of implementing these techniques are taught, and parents target specific behaviors for intervention over the next week. The fact that the best way to change behavior is to reward positive behavior is emphasized. The previous week's homework is discussed.

- Week 7: The use of Time Out as a punishment technique. Parents are taught a structured procedure for implementing time out. The rationale for the technique is discussed, and problems with its appropriate use are identified. The necessity of identifying incompatible positive behaviors to be reinforced is emphasized. Videotaped scenes are used as a teaching aid. Parents are helped to construct intervention programs using all the techniques discussed in therapy thus far.
- Week 8: Home-based behavior change programs for school problems. Parents are taught to use the techniques of observing and recording behavior, rewarding positive behavior, and ignoring and punishing undesirable behavior with school problems. Special problems exist in intervening in school behavior, however, including minimizing the effort needed from the classroom teacher. Parents are taught a

Daily Home Report Card system. Ongoing intervention programs for behaviors in the home are reviewed and adjusted for each family.

Week 9: Specific interventions for noncompliance in the home. Parents are taught the use of clearly stated commands, along with standard behavior-change techniques already discussed. Videotaped scenes are used as a teaching aid. Ongoing interventions are reviewed and adjusted.

Week 10: Behavioral contracting. Parents are taught how to implement the techniques of reinforcement and response cost through negotiation, especially with older children. The use of formal contracts is discussed. Ongoing interventions are reviewed and adjusted.

Week 11: The use of physical punishment. The conditions for effective punishment are reviewed, including consistent use, and temporal contiguity with the punished behavior. Problems with the use of physical punishment are discussed, including modeling of aggression, inhibition of assertive behavior in the child, and promotion of undesirable escape or avoidance behavior. Parents are taught a set of rules to be followed if they do choose to

use physical punishment. The families' individual intervention projects are reviewed and adjusted.

Week 12: Management of future problems, and termination.

The skills developed in the program are reviewed. Emphasis is placed on the fact that parents have probably not eliminated their child's problems, but have learned a system of behavior management techniques which can be employed whenever problems arise. Modifications in the techniques as the child's age increases are also discussed. Videotaped interactions are reviewed as examples. A general discussion of termination is held, and post-therapy assessments are scheduled.

APPENDIX B

APPENDIX B

Item Composition and Scoring of Measures

Center for Epidemiological Studies Depression Scale

The subject responds on a 4-point scale from Rarely Or None Of The Time (0) to Most Or All Of The Time (3) according to how he or she felt in the preceding week. Items 4, 8, 12, and 16 are reverse scored.

1. I was bothered by things that don't usually bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues, even with help from my family and friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.

19. I felt that people disliked me.

20. I could not "get going".

Dyadic Adjustment Scale

Items 1 through 15 are scored on a 6-point scale from Always Agree (5) to Always Disagree (0), for the following activities.

1. Handling family finances.
2. Matters of recreation.
3. Religious matters.
4. Demonstrations of affection.
5. Friends.
6. Sex relations.
7. Conventionality (correct or proper behavior).
8. Philosophy of life.
9. Ways of dealing with parents or in-laws.
10. Aims, goals, and things believed important.
11. Amount of time spent together.
12. Making major decisions.
13. Household tasks.
14. Leisure time interests and activities.
15. Career decisions.

Items 16 through 22 are scored on a 6-point scale from All the Time (0) to Never (5). Items 18 and 19 are reverse scored.

16. How often do you discuss or have you considered
divorce, separation, or terminating your relationship?

17. How often do you or your mate leave the house after a fight?
18. In general, how often do you think that things between you and your partner are going well?
19. Do you confide in your mate?
20. Do you ever regret that you married (or lived together)?
21. How often do you and your partner quarrel?
22. How often do you and your partner "get on each other's nerves"?

Items 23 and 24 are scored on a 5-point scale from Every Day (5) to Never (0).

23. Do you kiss your mate?
24. Do you and your mate engage in outside interests together?

Items 25 through 28 are scored on a 6-point scale from More Often Than Once A Day (5) to Never (0), according to how often the couple engages in the following activities.

25. Have a stimulating exchange of ideas.
26. Laugh together.
27. Calmly discuss something.
28. Work on a project together.

Items 29 and 30 are answered Yes (0) or No (1) according to whether they have caused a problem in the past few weeks.

29. Being too tired for sex.
30. Not showing love.

Item 31 requires the respondent to indicate the point on a 7-point scale from Perfect (6) to Extremely Unhappy (0) which best describes the amount of "happiness" in his or her relationship.

Item 32 requires the respondent to choose the one statement which best describes their feeling about their relationship.

- 0 = My relationship can never succeed, and there is no more that I can do to keep the relationship going.
- 1 = It would be nice if it succeeded but I refuse to do any more than I am doing now to keep the relationship going.
- 2 = It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.
- 3 = I want very much for my relationship to succeed, and will do my fair share to see that it does.
- 4 = I want very much for my relationship to succeed, and will do all I can to see that it does.
- 5 = I want desperately for my relationship to succeed, and would go to almost any length to see that it does.

Life Events Scale

The respondent indicates if any of the following events have happened to him or her in the last six months or the last year.

1. Got married.

2. Troubles with boss.
3. Legal troubles resulting in your being held in jail.
4. Death of a spouse.
5. A major change in sleeping habits (a lot more or a lot less sleep, or change in part of day when asleep).
6. Death of a close family member.
7. A major change in eating habits (a lot more or a lot less food intake, or very different meal hours or surroundings).
8. Foreclosure on a mortgage or loan.
9. Revision of personal habits (dress, manners, associations, etc.).
10. Death of a close friend.
11. A minor violation of the law (like traffic tickets, jaywalking, disturbing the peace, etc.).
12. A major personal achievement.
13. A pregnancy (or for a man, the pregnancy of spouse or partner).
14. Sexual difficulties.
15. In-law troubles.
16. Major change in number of family get-togethers (e.g., a lot more or a lot less than usual).
17. Major change in financial state (e.g., a lot worse off or a lot better off than usual).
18. Gaining a new family member (e.g., through birth, adoption, oldster moving in, etc.).

19. Change in residence.
20. Son or daughter leaving home (e.g., marriage, attending college, etc.).
21. Marital separation from mate.
22. Major change in church activities (e.g. a lot more or a lot less than usual).
23. Marital reconciliation with mate.
24. Being fired from work.
25. Divorce.
26. Changing to a different line of work.
27. Major change in the number of arguments with spouse (e.g., a lot more or a lot less than usual regarding childrearing, personal habits, etc.).
28. Major change in responsibilities at work (e.g., promotion, demotion, lateral transfer).
29. Wife beginning or ceasing work outside the home.
30. Major change in working hours or conditions.
31. Major change in usual type and/or amount of recreation.
32. Taking on a mortgage greater than \$10,000 (e.g., purchasing a home, business, etc.).
33. Taking on a mortgage less than \$10,000 (e.g. purchasing a car, TV, freezer, etc.).
34. Major personal injury or illness.
35. Major business readjustment (e.g., merger, reorganization, bankruptcy, etc.).

36. Major change in social activities (e.g., clubs, dancing, movies, visiting, etc.).
37. Major change in living conditions (e.g., building a new home, remodeling, deterioration of home).
38. Retirement from work.
39. Vacation.
40. Christmas.
41. Changing to a new school.
42. Beginning or ceasing formal schooling.

Family Crisis Checklist

All items are scored according to their occurrence or nonoccurrence during the past week, on the following scale:

- 0 = Event did not occur.
- 1 = Event occurred, but had no effect on me.
- 2 = Event occurred, and had slightly negative effect on me.
- 3 = Event occurred and had very negative effect on me.

A. Family Relations Scale

1. Tension between two or more family members not involving you concerning past or present conflict.
2. Family member arrived home an hour or 2 later than expected, or has not come home at all.
3. Family member on food binge.
4. Conflict or tension between you and any family member(s).

5. Someone in family other than you in bad mood, unhappy, angry or depressed.
6. One or more of your children came home very upset.
7. Disagreement with a friend.
8. Physical fighting between family members.
9. Disagreement with relative outside family.
10. Family member on a diet or trying to stop smoking.
11. Childcare problems: babysitters, daycare center, etc.
12. Family member did not do fair share of work around house.

B. Family Tasks Scale

1. Something stolen from family member.
2. Conflict or disagreement with any of your children over schoolwork/homework.
3. Someone in family injured or hurt.
4. School contacted you because of any child's poor work, bad behavior, tardiness, truancy, or other problem behavior.
5. Family member visited doctor or dentist.
6. Someone criticized the way you are raising/handling your children.
7. One or more family members are ill.
8. You were overworked at home.
9. Disagreement with neighbor.
10. You felt extremely upset or emotional in general for a day or more.

11. Family schedule seriously disrupted for more than one day because of something unexpected.

C. Family Finances Scale

1. There was not enough money to buy something important needed for the family, such as food or clothing.
2. Looking for a job -- made contacts, such as calling, applying, interviewing, etc.
3. Did not have enough money to buy a desired but not absolutely needed item.
4. Paid the bills.
5. You or someone in the family lost money.
6. You failed to receive expected money or had unexpected bill.
7. Did not have enough money to pay the bills.
8. Job security threatened for you or other adult in home.

Insularity Questionnaire

The respondent lists the number of contacts during the past week for each of the following types of relationships.

1. Friends.
2. Relatives (not living with you).
3. Co-workers.
4. Neighbors.
5. Agencies (such as employment office, social worker, etc.), doctors, lawyers, or other professionals.

For each type of relationship the respondent also indicates what proportion of contacts was positive, and what

proportion was negative, on a 5-point scale from None (0) to All (4).

Pre-Therapy Expectations Questionnaire

Items 1 and 2 are scored on a 5-point scale from Much Above Average (4) to Much Below Average (0). All other items are scored on a 7-point scale from Improve Greatly (6) to Make Much Worse (0).

A. Expectations for Groups Scale

The subject responded according to how he or she expected the therapy program to affect each item.

1. The overall quality of the groups.
2. The skill of the therapists.
3. The quality of my relationship with my child.
4. My ability to be a good parent.
5. The way our family gets along.
6. My self-confidence as a parent.
7. My child's reading skills.
8. My self-understanding.
9. The number of problem behaviors my child exhibits.
10. My child's physical health.
11. My adjustment at work.
12. My child's happiness.
13. My knowledge about children.
14. My relationship with my spouse or partner.
15. My child's self-confidence.
16. My personal happiness.

17. The way my child gets along at school.
18. My child's ability to understand me.
19. My child's ability to express feelings.
20. My child's ability to get along with other children.
21. How much I enjoy being with my child.
22. My child's willingness to obey me.
23. My ability to control my temper with my child.
24. My child's respect for me.
25. My respect for my child.
26. How much affection I feel for my child.
27. My ability to listen to my child.
28. The amount of control I have over my child's behavior.

B. Expectations for Spouse Scale

The subject responded according to how he or she expected the therapy program to affect his or her spouse with respect to each item.

1. The quality of my spouse's relationship with the child.
2. My spouse's personal happiness.
3. My spouse's relationship with me.
4. My spouse's adjustment at work.
5. My spouse's ability to be a good parent.
6. My spouse's knowledge about children.

C. Expectations for Medication Scale

The subject responded according to how he or she expected the medication to affect each item.

1. The quality of my relationship with my child.

2. My ability to be a good parent.
3. The way our family gets along.
4. My child's reading skills.
5. The number of problem behaviors my child exhibits.
6. My child's physical health.
7. My child's happiness.
8. My child's self-confidence.
9. The way my child gets along at school.
10. My child's ability to get along with other children.
11. How much I enjoy being with my child.
12. My child's willingness to obey me.
13. My child's respect for me.
14. The amount of control I have over my child's behavior.

Consumer Satisfaction Questionnaire

A. Overall Satisfaction Scale

The subject responded on a 7-point scale anchored with an appropriately worded positive statement (e.g. Greatly Improved, Very Satisfied, Helped Very Much, Strongly Recommend, etc.) and an appropriately worded negative statement (e.g. Considerably Worse, Very Dissatisfied, Hindered More Than Helped, Strongly Not Recommend, etc.). The positive statements were scored 6, the negative statements were scored 0.

1. The major problem(s) that originally prompted me to begin treatment for my child is (are) at this point...

2. My child's problems that have specifically been treated at the clinic are at this point...
3. My child's problems which have NOT been specifically treated at the clinic are...
4. My feelings at this point about my child's progress are that I am...
5. To what degree has the treatment program helped with other general personal or family problems not directly related to your child?
6. At this point my expectation for a long-term satisfactory outcome of the treatment is...
7. I feel that the use of medication for treating my child's behavior problems is...
8. I feel that the use of parent skills training groups for treating my child's behavior problems is...
9. I feel that the use of child problem solving groups for treating my child's behavior problems is...
10. Would you recommend this program to a friend or relative?
11. How confident are you in managing current behavior problems on your own?
12. How confident are you in your ability to manage future behavior problems using what you have learned in this program?
13. My overall feeling about the treatment program is...

B. Ease of Use Scale

All items are scored on a 7-point scale from Extremely Difficult to Understand (0) to Extremely Easy to Understand (6) for items 1 to 6, or from Extremely Difficult (0) to Extremely Easy (6) for items 7 to 16.

1. The lecture information was...
2. The handouts were...
3. The book Parents are Teachers was...
4. The small group discussions regarding the home-based behavior change projects were...
5. The home-based behavior change projects were...
6. In general the homework assignments were...
7. Charting appropriate and inappropriate behavior was...
8. "Catching your child being good" was...
9. "Special Time" was...
10. Natural consequences (ignoring problem behavior) was...
11. Logical consequences was...
12. Time-out was...
13. The daily report card system for school behavior problems was...
14. Contingency contracting (negotiation of behavior change programs with older children) was...
15. I found administering the medication to my child to be...
16. The overall group of techniques was...

C. Usefulness Scale

All items are scored on a 7-point scale from Extremely Not Useful (0) to Extremely Useful (6).

1. The lecture information was...
2. The handouts were...
3. The book Parents are Teachers was...
4. The small group discussions regarding the home-based behavior change projects were...
5. The home-based behavior change projects were...
6. In general, the homework assignments were...
7. Charting appropriate and inappropriate behavior was...
8. "Catching your child being good" was...
9. "Special Time" was...
10. Natural consequences (ignoring problem behavior) was...
11. Logical consequences was...
12. Time-out was...
13. The daily report card system for school problem behaviors was...
14. Contingency contracting (negotiation of behavior change programs with older children) was...
15. I found the use of medication with my child to be...
16. The overall group of techniques was...

D. Leaders Scale

The subject responded on a 7-point scale anchored with an appropriately worded positive statement (e.g. Superior, Very Understandable, Extremely Helpful, I Like Them Very Much,

etc.) and an appropriately worded negative statement (e.g. Very Poor, Too Technical to Understand, Extremely Not Helpful, I Dislike Them Very Much, etc.). The positive statements were scored 6, the negative statements were scored 0.

1. I feel the therapists' teaching was...
2. The therapists' preparation was...
3. The group leaders made the information...
4. Concerning the therapists' interest in me and my problems with my child I was...
5. At this point I feel that the therapists in the treatment program were...
6. Concerning my personal feeling toward the therapists...

Ratings of Resistance

The therapist rates each parent on a 4-point scale from Not At all (0) to A Lot (3) for the following items.

1. Resists the use of positive reinforcement techniques.
2. Refuses to target positive child behaviors.
3. Relies on the inappropriate use of punishment techniques.
4. Insists on implementing overly complicated programs too soon.
5. Refuses to follow instructions in a step-by-step fashion.
6. Questions the therapists' qualifications, or implies that the therapists do not know what they are doing.

7. Interrupts or talks over group members.
8. Interrupts or talks over therapists.
9. Brings up topics irrelevant to the topic being discussed by the group.
10. Lapses into inattention, or does not respond.
11. Sets unreasonably high expectations for child's behavior.
12. Insists on immediate and complete improvement in child's behavior.

APPENDIX C

APPENDIX C

Correlations corrected for attenuation due to measurement error for mothers.

	1	2	3	4	5	6	7	8	9
1. Medication Dose	1.000								
2. Dyadic Adjustment	-.178	1.000							
3. Life Events	-.005	-.280	1.000						
4. CESD	.202	-.199	.193	1.000					
5. Family Relations	-.128	-.107	.398	.147					
6. Family Tasks	-.318	-.300	.407	.480	1.000				
7. Family Finances	.079	-.177	.449	.373	.663	1.000			
8. Social Contacts	-.030	-.044	.356	-.095	.516	.395	1.000		
9. Neg:Pos Contacts	-.064	.040	.086	.097	.319	.189	.327	1.000	
10. Expectations: Group	-.172	-.009	.012	.302	-.057	.390	.123	-.101	1.000
11. Expectations: Spouse	.260	-.076	.097	.186	.126	.276	.093	-.069	.110
12. Expectations: Meds	-.173	-.366	.276	.428	.194	.302	.220	.319	.054
13. Overall Satisfaction	-.074	.210	-.167	-.552	.078	.411	.301	.180	.164
14. Ease of Use	.074	-.186	.037	.536	-.019	-.253	-.430	.497	-.480
15. Usefulness	.064	.243	-.046	-.548	.140	.266	-.217	-.133	.073
16. Leaders	-.078	-.054	.177	-.689	.181	-.229	-.406	.434	-.405
17. Homework	-.377	.005	.143	-.173	-.153	-.293	-.298	.457	-.416
18. Overall Attendance	-.332	.259	-.167	-.460	.244	.255	-.126	-.025	.207
19. Attendance 1	-.364	.098	-.085	.223	.208	.013	-.600	-.072	-.152
20. Attendance 2	-.262	-.176	.010	-.290	.013	.249	.074	-.252	.143
21. Attendance 3	-.267	.350	-.220	-.621	.262	.246	-.695	.090	-.157
22. Overall Resistance	.170	.005	-.094	-.300	.097	-.117	-.479	-.076	-.209
23. Resistance 1	-.018	-.202	-.023	.098	-.134	-.222	-.236	.077	-.288
24. Resistance 2	-.079	-.080	-.006	-.033	-.003	.269	-.105	.071	-.030
25. Resistance 3	.163	.008	-.219	-.228	.035	.152	-.136	.030	-.126
					-.293	-.306	-.302	.174	-.413

Appendix C (cont'd.)

	10	11	12	13	14	15	16	17	18
1. Medication Dose									
2. Dyadic Adjustment									
3. Life Events									
4. CESD									
5. Family Relations									
6. Family Tasks									
7. Family Finances									
8. Social Contacts									
9. Neg:Pos Contacts									
10. Expectations: Group	1.000								
11. Expectations: Spouse	.534	1.000							
12. Expectations: Meds	.788	.264	1.000						
13. Overall Satisfaction	.129	.105	.066	1.000					
14. Ease of Use	.144	.331	.115	-.375	1.000				
15. Usefulness	.248	.192	.055	.820	-.594	1.000			
16. Leaders	.020	.005	-.035	.361	-.449	.651	1.000		
17. Homework	.330	-.041	.057	.220	-.023	.222	.009	1.000	
18. Overall Attendance	.153	-.047	-.099	.536	-.011	.533	.252	.539	1.000
19. Attendance 1	0.000	-.248	.056	-.044	.070	-.134	-.198	.030	.025
20. Attendance 2	.128	-.081	.013	.369	.206	.400	.304	.435	.805
21. Attendance 3	.112	.161	-.192	.604	-.174	.559	.269	.532	.931
22. Overall Resistance	-.490	-.303	-.220	.183	-.280	.216	-.205	-.458	.005
23. Resistance 1	-.148	-.168	.103	-.079	-.078	-.037	-.186	-.285	.043
24. Resistance 2	-.481	-.284	-.175	-.138	-.225	-.001	-.200	-.452	-.359
25. Resistance 3	-.545	-.324	-.154	.137	-.245	.223	-.326	-.537	-.156

Appendix C (cont'd.)

	19	20	21	22	23	24	25
1. Medication Dose							
2. Dyadic Adjustment							
3. Life Events							
4. CESD							
5. Family Relations							
6. Family Tasks							
7. Family Finances							
8. Social Contacts							
9. Neg:Pos Contacts							
10. Expectations: Group							
11. Expectations: Spouse							
12. Expectations: Meds							
13. Overall Satisfaction							
14. Ease of Use							
15. Usefulness							
16. Leaders							
17. Homework							
18. Overall Attendance	1.000						
19. Attendance 1	-.221	1.000					
20. Attendance 2	-.011	.612	1.000				
21. Attendance 3	-.008	-.081	.046	1.000			
22. Overall Resistance	-.082	.130	-.011	.995	1.000		
23. Resistance 1	.049	-.222	-.295	.979	.871	1.000	
24. Resistance 2	.113	-.090	-.262	.999	.847	.918	1.000
25. Resistance 3							

APPENDIX D

APPENDIX D

Uncorrected correlations between all measures for fathers.

	1	2	3	4	5	6	7	8	9
1. Medication Dose	1.000								
2. Dyadic Adjustment	-.299	1.000							
3. Life Events	.198	.081	1.000						
4. CESD	-.108	-.012	.337	1.000					
5. Family Relations	-.091	-.117	.157	.335	1.000				
6. Family Tasks	-.025	-.073	.143	.216	.520	1.000			
7. Family Finances	.140	-.191	.223	.380	.473	.197	1.000		
8. Social Contacts	-.034	-.016	.456	.302	.200	.235	.276	1.000	
9. Neg:Pos Contacts	.056	.124	.314	.430	.140	.314	.180	.247	1.000
10. Expectations: Group	.208	.287	-.054	-.292	-.336	-.259	-.069	-.156	-.043
11. Expectations: Spouse	-.051	-.091	-.179	-.125	-.284	-.403	-.063	-.348	-.097
12. Expectations: Meds	-.191	.036	-.057	.165	-.267	-.233	.077	-.194	.091
13. Overall Satisfaction	-.1213	-.107	-.469	-.333	-.358	-.302	-.256	-.265	-.134
14. Ease of Use	.452	.183	.381	-.212	-.072	-.036	-.240	.451	-.113
15. Usefulness	-.354	-.356	-.359	-.044	.085	.037	.198	-.316	-.011
16. Leaders	-.400	-.140	-.350	.068	-.145	-.255	.007	-.511	-.220
17. Homework	-.377	-.059	-.262	-.376	.196	.065	-.288	-.289	-.068
18. Overall Attendance	.129	-.283	.107	-.021	.283	.264	.013	-.048	.166
19. Attendance 1	.336	-.161	.281	.061	.282	.464	.029	.092	.355
20. Attendance 2	.131	-.311	.117	-.037	.354	.207	.063	-.083	.034
21. Attendance 3	-.013	-.305	-.117	-.051	.138	.153	.040	-.079	.047
22. Overall Resistance	.292	.333	-.092	-.666	-.360	-.365	-.898	-.255	-.181
23. Resistance 1	-.346	.397	.174	.807	-.053	.342	-.294	.081	.522
24. Resistance 2	.715	.316	-.095	-.664	-.268	-.201	-.676	-.175	-.127
25. Resistance 3	--	.588	.964	-.067	-.419	-.235	-.194	.246	.089

Appendix D (cont'd.)

	10	11	12	13	14	15	16	17	18
1. Medication Dose									
2. Dyadic Adjustment									
3. Life Events									
4. CESD									
5. Family Relations									
6. Family Tasks									
7. Family Finances									
8. Social Contacts									
9. Neg:Pos Contacts									
10. Expectations: Group	1.000								
11. Expectations: Spouse	.811	1.000							
12. Expectations: Meds	.726	.859	1.000						
13. Overall Satisfaction	-.128	.021	-.005	1.000	1.000				
14. Ease of Use	.032	-.283	-.534	-.180	-.733	1.000			
15. Usefulness	-.239	.031	.255	.595	-.431	.550	1.000		
16. Leaders	-.143	.068	.167	.219	.055	.232	.298	1.000	
17. Homework	-.116	-.023	-.216	.067	.009	.232	.258	.322	1.000
18. Overall Attendance	-.303	-.196	-.312	-.153	.148	-.010	.258	.224	.876
19. Attendance 1	.035	-.100	-.105	-.310	.073	-.193	.057	.259	.948
20. Attendance 2	-.310	-.229	-.338	-.192	.073	-.002	.380	.264	.896
21. Attendance 3	-.412	-.216	-.306	.162	-.196	.188	.274	.213	.347
22. Overall Resistance	.282	.240	-.247	.151	.493	-.584	-.111	-.377	-.224
23. Resistance 1	.031	-.044	.136	-.510	-.152	-.296	-.018	-.134	-.328
24. Resistance 2	.426	.251	-.170	0.000	.651	-.802	-.441	-.865	-.949
25. Resistance 3	.500	.577	.573	-.649	-.734	-.415	.547		

Appendix D (cont'd.)

	19	20	21	22	23	24	25
1. Medication Dose							
2. Dyadic Adjustment							
3. Life Events							
4. CESD							
5. Family Relations							
6. Family Tasks							
7. Family Finances							
8. Social Contacts							
9. Neg:Pos Contacts							
10. Expectations: Group							
11. Expectations: Spouse							
12. Expectations: Meds							
13. Overall Satisfaction							
14. Ease of Use							
15. Usefulness							
16. Leaders							
17. Homework							
18. Overall Attendance	1.000						
19. Attendance 1	.811	1.000					
20. Attendance 2	.655	.790	1.000				
21. Attendance 3	-.268	-.273	-.280	1.000			
22. Overall Resistance	.198	-.257	-.278	.898	1.000		
23. Resistance 1	.170	-.421	-.317	.863	.660	1.000	
24. Resistance 2	-.949	-.949	--	.872	.548	.678	1.000
25. Resistance 3							

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