

*TREATMENT OF CHILD ABUSE: A REVIEW OF  
THE BEHAVIORAL INTERVENTIONS*

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The problem of child abuse has become prominent in the past decade; this has led to increased research on its treatment. This paper describes the behavioral treatment approaches that have been used to alleviate abusive parenting practices, and it also discusses current issues and future directions for research in this area.

DESCRIPTORS: child abuse, behavior therapy, parent-child interaction, parents, treatment

The abuse of children has attracted much attention in the last decade, and has resulted in renewed emphasis on its status as a social problem. The need for effective treatment of this social problem has become more urgent as the incidence of abuse increases. The problem of child abuse is far reaching: U.S. statistics strongly suggest that neglect and abuse of children may be the leading cause of death in young children (Fontana & Robinson, 1976). Estimates of the incidence of abuse vary: 60,000 cases per year according to Kempe (1973); 200,000 to 500,000, according to Light (1973); and 1.5 million, according to Fontana (1973). The two principal sources of data from which these estimates were derived usually include hospital and community agency reports and surveys (Parke & Collmer, 1975). Although the estimates are quite varied, possibly due to reporting problems in most states (Parke & Collmer, 1975), they all suggest that intrafamily violence toward chil-

dren is a problem of considerable magnitude.

There are as many definitions of child abuse as there are estimates of its incidence. Parke and Collmer (1975) have described three approaches. First, abuse has been defined in terms of outcome, such as injuries. Second, abuse has been defined in terms of intentionality. This definition usually involves observable acts, but also the subjective judgments of observers concerning a parent's or caretaker's intention to harm a child. Third, abuse is not a set of behaviors, "but rather a culturally determined label which is applied to behavior and injury patterns as an outcome of a social judgment on the part of the observer" (p. 512).

The studies reviewed here often define abuse using a combination of these three approaches. Thus, a definition that evolves from the literature includes the presence of a physical injury, intentionally inflicted, and, by social judgment, deemed abusive.

Professionals differ in their explanations and theoretical orientations about the causes of abuse, and so their treatment perspectives also vary. The intervention strategies noted in the literature appear under a variety of labels, including legal-correctional, social work, sociological, psychodynamic, behavioral (Resick & Sweet, 1979), psychiatric, and social-situational (Parke & Collmer, 1975). This review will consider only the behavioral interventions, identify some of the

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Table 1  
Behavioral Articles Without Data

<i>Authors</i>	<i>Subjects</i>	<i>Setting</i>	<i>Independent Variables</i>	<i>Dependent Variables</i>	<i>Results</i>
Savino & Sanders, 1973	abusive families	clinic/home	group parent training: —topics on child development home visits: —taught parenting skills	—	—
Tracy & Clark, 1974	abusive families	home	parents taught to use positive reinforcement	—	—
Tracy, Ballard, & Clark, 1975	41 abusive families	home	same as Tracy & Clark, 1974	—	follow-up on the families in the Tracy & Clark, 1974 study after one year: of the 41 families, 16 cases were closed the first year, only 7 families completed therapy
Doctor & Singer, 1978	35 abusive families	home	—information about child development —parents taught to record/identify child behaviors —parents taught to use positive reinforcement, response cost, time-out via feedback & modeling	—	—
Hughes, 1974	mother, father, 6-year-old girl	clinic home project-encopresis	programmed text taught parents to praise and use candy reinforcers for correct toileting	soiling	encopresis ended in one week
Polakow & Peabody, 1975	mother, 7-year-old son	clinic	taught parents —contracting —time out —differential attention	—	authors' summary—all parent/child behaviors showed improvement

Mastria, Mastria, & Harkins, 1979	mother, 7-year-old son	clinic	<ul style="list-style-type: none"> <li>—videotaped play sessions of mother/child interactions</li> <li>—taught mother:               <ul style="list-style-type: none"> <li>—differential attention</li> <li>—how to redirect child's aggression</li> <li>—self-time-out</li> </ul> </li> </ul>	mother: <ul style="list-style-type: none"> <li>—physical assault</li> <li>—verbal rejection of child</li> <li>—attention to appropriate child behavior</li> <li>—limit setting</li> <li>—redirection of aggression</li> </ul> child: <ul style="list-style-type: none"> <li>—physical assault</li> <li>—teasing</li> <li>—taunting</li> <li>—verbal/physical affection</li> </ul>	authors' summary—mothers' behaviors improved during treatment
Christophersen, Kuehn, Grinstead, Barnard, Rainey, & Kuehn, 1976	12 abusive families	home	parent training: <ul style="list-style-type: none"> <li>—praise</li> <li>—token system</li> <li>—time-out</li> <li>—token losses</li> </ul> therapists trained parents by: <ul style="list-style-type: none"> <li>—modeling</li> <li>—rehearsal</li> <li>—feedback/instruction</li> </ul>	<ul style="list-style-type: none"> <li>—child compliance</li> <li>—noncompliance</li> <li>—talking-back</li> <li>—fights</li> <li>—tantrums</li> </ul>	study not completed

problems with this research, and present suggestions for future investigations.

Behavioral interventions can be broadly divided into two subcategories: (a) strategies that have been or might prove to be successful in changing parent-child interaction patterns, but without data supporting the utility of the strategies and, (b) empirical investigations that define specific dependent and independent variables and demonstrate control of the parent-child behaviors.

#### *Behavioral Treatment Programs (Without Data)*

Most of the nonempirical behavioral treatment programs are descriptive in nature. A few investigations must report that "the data are not yet completely collected, but the results look promising." These articles can be identified as behavioral by either the treatment procedures used or the parent-child behaviors targeted for change.

Nine of the twenty programs reviewed presented no data to substantiate the authors' claims that the programs were successful in treating abusive parents; however, some of the studies do provide useful information to future investigators by describing the settings where treatment has taken place (home or clinic), the treatment procedures used, and the methods used to teach parents. (See Table 1 for details on each program).

For three of the studies, training took place in the clinic only (Hughes, 1974; Mastria, Mastria, & Harkins, 1979; Polakow & Peabody, 1975) or in the clinic and home (Savino & Sanders, 1973), whereas home training took place in the remainder of the studies (Christophersen, Kuehn, Grinstead, Barnard, Rainey, & Kuehn, 1976; Doctor & Singer, 1978; Tracy, Ballard, & Clark, 1975; Tracy & Clark, 1974). In general, all the authors used treatment procedures that included training parents to reinforce their children's appropriate behavior and to use extinction procedures such as time-out or token loss. In addition, parents in some studies

were taught how to be assertive, how to contract with their children (Polakow & Peabody, 1975), and how to use a self-time-out procedure (a parent was taught to take the child to a neighbor's house when losing control, then take a walk to calm down) (Mastria et al., 1979). The methods of training parents included using a programmed text (Hughes, 1974; Reid, Taplin, & Lorber, 1981), modeling by the therapist, and rehearsal by the parent (e.g., Christophersen et al., 1976). Most parents received individual training, although some were taught in groups (Polakow & Peabody, 1975; Savino & Sanders, 1973).

#### *Behavioral Treatment Programs (With Data)*

The remaining 11 studies present pre- and posttreatment data on parent-child interactions—the only published studies that included outcome data on parent-child interactions *and* described the methodologies used. These studies represent the earliest known attempts to test behavioral interventions with abusive families. Because they are pioneering studies, methodological flaws are common; thus the conclusions drawn from these investigations should probably be approached as conjecture rather than fact. The unique strengths and weaknesses of each study will be summarized briefly; the details are presented in Table 2. A general methodological critique of this literature will conclude.

One of the earliest studies was described by Gilbert (1976). A mother sought professional help because she disliked her 4-yr-old daughter and would frequently yell at, strike, or ignore the child. The investigators attempted to increase the mother's positive feelings by teaching her to praise the child while interacting in nine activities that were selected by the mother (e.g., playing indoor games, taking walks, holding on the lap). The mother recorded her level of enjoyment for each of the nine behaviors and showed improvements in all activities after 10 weeks of intervention.

Two weaknesses limit the conclusions that can be drawn from this study: (a) Observations of parent-child interactions were not made in the home or clinic. (b) The source of data was self-reports from the parent which have been shown to be of limited value in previous studies (e.g., Herbert & Baer, 1972; Lipinski & Nelson, 1974).

In another early study, Sandford and Tustin (1974) described a treatment program quite different from the others in this review. These authors, rather than training the parents to extinguish undesirable child behaviors (in this case excessive crying in a 13-mo-old child), trained the abusive father to increase his tolerance of the child's crying up to a period of 15 min—long enough to allow the mother to pacify the child and stop the crying. The experimenters tape-recorded the child's crying and, during baseline, found that the father could listen to the crying an average of only 1 min before removing the headphones. During the next phase, the father was reinforced with the presentation of folk music (a type of music the father found pleasing) for listening to progressively longer periods of crying. In addition, a videotape of the child laughing and playing was shown while the folk music was played, to develop the sight of the child as a conditioned reinforcer. During the final phase of the study, the father was reinforced with music only after listening to the crying for progressively longer periods of time, and treatment was terminated after the 13th session when the father was able to tolerate the child's crying for 15 min without removing the headphones.

A major point to consider in this study is that the authors chose to increase the father's tolerance to the child's crying rather than teaching the parents to terminate the crying through extinction procedures which could possibly have stopped the child's crying in fewer than 13 sessions. By increasing the father's tolerance, the therapists not only allowed the child's aversive behavior to continue, but also set the stage for possible abusive episodes each time the child

cried for more than 15 min. In addition, the child remained in the home only 2 weeks after treatment ended, which brings into question the effectiveness of this approach with this family.

Jeffery (1976) studied a two-parent family in which a 6-yr-old boy was the target of abuse. The intervention procedures included teaching the parents to increase their positive and decrease the negative verbal responses to the child. A social worker made daily home visits for 2 weeks, and devised a reinforcement plan whereby the parents were rewarded with tokens (which they exchanged for wall posters) when their positive responses exceeded their negative responses to the child during the 1-hr sessions. To test for generalization of the new behaviors, the experimenters were allowed to place a tape recorder in the home to record family interactions at random times throughout the day. The family members were unaware of the actual recording times. Again, the parents were rewarded for improvements in their verbal interactions. The results demonstrated increases in the relative proportion of their positive responses from a baseline mean of about 25% to a mean during treatment of approximately 70%, and 75% during the tape-recorded periods. Negative responses dropped from a 60% mean during baseline to 20% at treatment, and stabilized at 30% during the taped sessions. No follow-up data were reported.

Other data which Jeffery presented concerned the amount of time a mother and her 5-yr-old son spent talking to each other during a 15-min observation session. A shared reward was given only if the mother spent at least 30% and the child at least 50% of the time talking to the other. Graphical data showed a fivefold increase in talking for the child and a threefold increase for the mother.

This study offers two novel and promising approaches. First, the use of a tape recorder to monitor parent-child verbal interactions is a less obtrusive and cheaper procedure for collecting data on maintenance than the presence of a human observer in the home. Secondly, the use

Table 2  
Behavioral Studies With Data

<i>Authors</i>	<i>Parent/ Child Data?</i>	<i>Subjects</i>	<i>Setting</i>	<i>Independent Variables</i>	<i>Dependent Variables</i>	<i>Design</i>	<i>Reliability</i>	<i>Source of Data</i>	<i>Results</i>	<i>Follow-up</i>	<i>Weaknesses</i>
Gilbert, 1976	parent only	mother, father, 4-yr-old girl	clinic	told parents to: —praise —interact with child	mother's level of enjoyment when interacting with child during 9 contact times (see text)	A-B	—	parent reports	on a 0-10 scale mother increased level of enjoyment for all 9 contact times, which maintained at follow-up	2 mos	-no reliability -poor source of data -poor design
Sandford & Tustin, 1974	parent only	mother, father, 13-mo-old girl	clinic	increased father's tolerance to crying via desensitization	to increase father's tolerance to child's crying	A-B-C A-Baseline B-Treatment Phase 1 C-Treatment Phase 2	—	decibel calibrations	father increased tolerance to crying from 1 to 15 minutes		-no reliability -no parent/child interaction data -question magnitude of change
Reid, Taplin, & Lorber, 1981	both	27 distressed home abusive families, 27 non-distressed families, 61 distressed-nonabusive families	home	parent training in: pinpointing & recording child behaviors, timeouts, contracts	TAB scores: cry, command, dependency, noncompliance, destructiveness, disapproval, high rate, tease, humiliation, ignore, negative, physical negative, yell, whine	two groups	overall 74.8% (Noted in Reid, Paterson, & Lorber [Note 1] paper.)	observation	significant ( $p < .05$ ) reductions in TAB scores for mothers and referred children in distressed-abusive families		-families assigned after study -no positive parent/child behaviors reported

Crozier & Katz, 1979	both	Family 1: 2 parents & children, ages 3, 4½, 7 years Family 2: mother and 4½-yr-old boy	home	same as Reid, Taplin, & Lorber, 1981	TAB scores and positive parent/child behaviors	A-B	overall Fam. 1: 97.9% Fam. 2: 90%	observation	reduction in TAB scores for all subjects, modest increases in positive behaviors for most subjects	7 mos	-magnitude of change questionable for aversive behaviors
Sandler, VanDercar, Milhoan, 1978	both	Family 1: mother, 4-yr-old girl Family 2: mother and 4 girls—10, 8, 3, 1 years	home	same as Reid, Taplin, & Lorber, 1981	<i>parent:</i> approval, physical positive/negative commands, laugh, talk <i>child:</i> talk, laugh	A-B	overall Family 1: 91.6% Family 2: not reported	observation	increases in mother approval & physical positive, positive commands, laugh, talk modest increases in child laugh, talk	5 mos	-poor design -relevant child behaviors not observed -poor description of training -reliability not reported for Family 2
Denicola & Sandler, 1980	both	Family 1: mother, step-father, 7-yr-old boy Family 2: mother, 3 girls, ages 5, 4, 3 yrs	home	same as Reid, Taplin, & Lorber, 1981, with coping-skills training: —relaxation —problem-solving —stress identification	parents only: TAB scores approval	A-B withdrawal	overall 84%	observation	modest increases in approval & decreases in TAB scores	yes, did not report inter-val posttreatment	-child behaviors not reported -modest changes in parent behaviors

Table 2 continued

<i>Authors</i>	<i>Parent/Child Data?</i>	<i>Subjects</i>	<i>Setting</i>	<i>Independent Variables</i>	<i>Dependent Variables</i>	<i>Design</i>	<i>Reliability</i>	<i>Source of Data</i>	<i>Results</i>	<i>Follow-up</i>	<i>Weaknesses</i>
Jeffrey, 1976	both	Family 1: mother, father, 6-yr-old boy Family 2: mother, 5-yr-old boy	home	reward by experimenter for improvements in parenting skills	positive/negative parent responses to child, parent/child talk to each other	A-B	positive/negative behaviors—82% tall—not reported	observation & tape recordings	increases in parent positive, decrease in parent negative behavior, fivefold increase in child talk, threefold increase in parent talk	Family 1: no Family 2: a few weeks	-period of follow-up not specified -training procedures not clearly defined
Wolfe, St. Lawrence, Graves, Brehony, & Kelly, Note 2	parent only	mother, 9-yr-old twin boys, 2-yr-old girl	clinic training, home visits to test generalization	parent training to reduce hostility (via bug-in-ear) Parent taught differential attention, time-out, use of physical positives	compliance task/cooperative task, hostile verbal/physical prompts, positive verbal/physical prompts	multiple baseline across parent behaviors	hostile physical prompts—96% hostile verbal prompts—86% positive physical prompt & positive verbal prompts—93%	observation	reductions in hostile behaviors to zero, increase in positive parent behaviors	1 mo	-short follow-up



Wolfe & Sandler, 1981	both	<p>Family 1: mother, 2½-yr-old boy</p> <p>Family 2: mother, 5-yr-old girl</p> <p>Family 3: mother, father, boy 5, girl, 2½</p>	home	<p>parent training:—<i>Parents Are Taught</i></p> <p>—taught parents to pinpoint, record child behavior</p> <p>—role plays</p> <p>—rehearsal</p> <p>—contin-gency-contracting, parent rewarded for using child-man-agement procedures</p>	TAB scores, child compliance	A-B withdrawal	TAB mean—84%, command—82%	observation	<p>reductions in TAB scores for all families in both treatment programs, increases in compliance for 2 of 3 families. No difference in effectiveness of two programs</p> <p>Family 1: 1, 2, 3, 12 mos</p> <p>Family 2: 1, 2, 3, mos</p> <p>Family 3: 1, 2, 3, 8, mos</p> <p>-ascending base-line in compliance for two families prior to treatment</p> <p>-did not comment on merits of two programs</p>
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Table 2 continued

<i>Authors</i>	<i>Parent/ Child Data?</i>	<i>Subjects</i>	<i>Setting</i>	<i>Independent Variables</i>	<i>Dependent Variables</i>	<i>Design</i>	<i>Reliability</i>	<i>Source of Data</i>	<i>Results</i>	<i>Follow-up</i>	<i>Weaknesses</i>
Wolfe, Sandler, Kaufman, 1981	both	16 abusive families	clinic/ home	group parent training: —topics on child de- velopment —problem- solving —modeled child man- agement skills —self-control training —individual- ized home- based training	Eyberg Child Behavior In- ventory, par- ent/child in- teractions during teach- ing sequence, casework questionnaire	two groups	positive re- inforcement —87%, commands— 81%, appro- priate punish- ment—88%	observa- tion, ques- tionnaire	increase in child man- agement skills for treatment families, de- crease in child prob- lems for treatment families, de- crease in caseworker ratings (in need of treat- ment), child management skills in treat- ment families significantly ( $p < .05$ ) different than control fami- lies	observa- tional data- 10 wk, court reports up to 1 yr.	-short follow- up

Wahler, 1980	both	18 mother-child pairs from abusive, low-income families	home	<ul style="list-style-type: none"> <li>—time-out</li> <li>—point system</li> <li>—ignoring</li> <li>—modeling of skills by therapist</li> <li>—Community Inter-action Checklist</li> </ul>	children: <ul style="list-style-type: none"> <li>—opposition</li> <li>—aversive opposition</li> <li>—complaint mothers:</li> <li>—aversive social attention</li> <li>—aversive instructions</li> <li>—social inter-action</li> </ul>	A-B	overall— 80%	observation, parent report (CIC)	parent training: <ul style="list-style-type: none"> <li>-decrease in aversive/oppositional behaviors of both mothers and children during treatment, but improvements were lost during follow-up period</li> <li>-on low friendship days there were more aversive parent/child contacts than on high friendship days</li> </ul>	-no reliability on parent report data (CIC)
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of shared rewards that are contingent on parent-child interaction may prove to be a more effective method of training interaction than rewarding a single individual, especially during the initial stages of intervention when the innate reinforcers may not be present.

A home-based treatment program for abusive families was reported by Reid et al. (1981) in their study of 27 nondistressed (nonabusive) families who were the control group, 61 distressed families (nonabusive, but complaining of child-conduct problems), and 27 distressed-abusive families (abusive and complaining of child-conduct problems). During home visits, observers coded 29 behaviors within each family, with particular emphasis on 14 behaviors, including noncompliance, crying, teasing, whining, yelling, and aggression which were later summarized as Total Aversive Behaviors (TAB) (Reid, 1967). Mothers of abusive families had higher rates of negative behaviors than mothers in the other two groups, particularly in aggression toward children and negative commands (having a threat component). The treatment program was offered to the 61 distressed and 27 distressed-abusive families and included instruction in social learning theory and its application to child management via programmed texts (Patterson, 1971; Patterson & Gullion, 1968); modeling of treatment techniques by the therapist; training parents to pinpoint, observe, and record certain child behaviors; instruction in how to reward appropriate behavior and how to use time-out; and training in how to negotiate family contracts. Summarized results were presented for only 24 of the 27 distressed-abusive families (and for none of the 61 distressed families), showing statistically significant ( $p < .05$ ) reductions in TAB scores from baseline to treatment termination for mothers and referred children in the abusive families, but not for fathers. The fathers in the distressed-abusive families were not significantly different before treatment, in terms of the 29 behavioral categories, from the fathers in the other two groups before

treatment, possibly explaining why there was no change during treatment.

The authors themselves point out a major limitation of this study. The division of treated families into distressed and distressed-abusive groups was made after the study was completed, creating the possibility of incorrect placement for some families. For example, it was possible that a family in the distressed group was actually abusive, or vice versa, because clear criteria for group placement were not chosen before the study began. Other weaknesses exist as well: (a) Although the authors state "A good deal of research has been carried out to demonstrate that the coding system produces reliable and stable data" (p. 7), no reliability data were presented in this study for the dependent measures. However, overall reliability was presented in footnote 2 of another manuscript (Reid, Patterson, & Lorber, Note 1). Observer reliability was assessed for 16% of the data collected with an overall mean agreement of 78.4% (range 51-100%). (b) The authors presented individual data for only two of the 14 behaviors: physical negative and command negative. Summaries of the other 12 behaviors would have been beneficial to help future researchers identify the frequencies of the other aversive behaviors, even though they were not found to be statistically significant in this study. (c) An important aspect of the parent-training program was teaching parents to reward appropriate child behaviors, although no measures of this class of parent behaviors (e.g., praise, physical and verbal attention) were reported.

Crozier and Katz (1979) treated two abusive families by using the Patterson Coding System (Patterson, Ray, Shaw, & Cobb, 1969) and a virtually identical treatment program as that previously described by Reid et al. (1981). In addition to reporting the percentages of total aversive behaviors by the parents and target children, the authors also reported the positive behaviors of each family member during baseline, treatment, and follow-up sessions. The

percentages of aversive behaviors for the families dropped from a baseline mean of approximately 16% for the children and 68% for the parents to a mean during treatment of about 12% for the children and 40% for the parents. Conversely, the percentages of positive behaviors increased from a baseline mean of approximately 6% for the children and 7% for the parents to a mean during treatment of about 8% for the children and 21% for the parents. These changes were maintained at follow-up. A potential weakness of this and the previous study is that a separate measure of each aversive behavior may be more helpful in determining treatment outcome than a composite score (such as the TAB score). From the data presented by the authors, a reader cannot discern the content of the aversive interactions—whether they were verbal or physical in nature, or some combination of the two. Interventions for these two classes of behavior may be quite different. In addition, one might question the effectiveness of the treatment program in reducing aversive behaviors, especially for the parents, because they continued to behave aversively 40% of the time during the treatment condition. Moreover, the treatment program only modestly improved the children's use of positive behaviors.

The Patterson Coding System (Patterson et al., 1969) was used to record the interaction patterns between abusive parents and their children in two families studied by Sandler, Vandercar, and Milhoan (1978). After seven baseline sessions, the parents were asked to read and complete assignments in the book *Parents Are Teachers* (Becker, 1971). When the parents completed assignments from the text, they were reinforced with such things as free movie tickets and free restaurant meals. Except for the choice of text, the treatment program was quite similar to that described by Reid et al. (1981), and, as in that study, improvements were made in both families, although irregularities in the data collection procedures seriously weakened the results. Also, the investigators reported on be-

haviors (e.g., talking, laughing) that may be less important than the behaviors that typically define or accompany abuse (e.g., aggression, yelling), and presented no data on behaviors in this latter category.

In a study by Denicola and Sandler (1980), the parent-training component and the method of in-home observation (Patterson Coding System) were similar to those described in other studies (e.g., Crozier & Katz, 1979; Sandler et al., 1978). However, training in "coping skills" (self-control) was added to the treatment program to reduce anger and aggression, by teaching parents to relax, modify their self-verbalizations in anger-producing situations, to recognize negative self-statements and feelings or arousal associated with anger and to use these cues for employing the coping strategies, and to focus on alternative solutions to aggressive behavior. The two treatment components were counterbalanced using an A-B withdrawal design (Hersen & Barlow, 1976): Family 1 received parent training throughout all 12 sessions, and training in coping skills was added during sessions 4-6 and 10-12. This order was reversed for Family 2: Coping skills training occurred during each treatment session, and parent training was added during sessions 4-6 and 10-12. The results indicated decreases in TAB scores and increases in rates of approval for both families during treatment. Relative differences in the two components could not be evaluated because both families showed improvement under both types of training.

The next three studies include treatment approaches pursued by Wolfe and his colleagues. In a group design, Wolfe, Sandler, and Kaufman (1981) randomly assigned 16 court-referred abusive parents to a control ( $N = 8$ ) or treatment group ( $N = 8$ ). Several outcome measures of family functioning were used in the study: the Eyberg Child Behavior Inventory (Eyberg & Ross, 1978) obtained the parents' initial and final descriptions of child behavior problems; a family caseworker rated the fam-

ily's need for treatment before and after the study via a questionnaire noting 10 common problem areas (e.g., child management, anger control); and weekly observations of parenting skills were carried out in the home by observers who recorded parental use of positive reinforcement, commands/prompts, and appropriate punishment.

The families in the control group received no treatment but supervision from their caseworker; the families in the treatment group participated in a group parent-training class and received individualized home-based training. During the weekly group meetings, the instructors covered topics in human development and child management, problem-solving, self-control, and modeling of appropriate child behavior. During weekly home visits parents were taught to identify and record child behaviors and to use the child-management procedures that were taught in the class. After the 8-wk treatment period, posttreatment measurements (on the Eyberg Child Behavior Inventory, home-observational data, and caseworker questionnaire) again were taken on all families. At a 10-wk follow-up, five families in the treatment group (three families were unavailable for follow-up) were assessed again. In addition, a 1-yr follow-up (based on court records) was conducted to learn of case dispositions and to determine if any of the families has been reported for additional abusive incidences.

Summaries of four dependent variables were offered: observational data on appropriate child-management skills and total frequency of child behavior problems, parental report of the number of child behavior problems, and caseworker ratings of family treatment needs. A two-factor multivariate analysis of variance was conducted to analyze the effect of the parent-training program; it demonstrated a significant posttreatment increase in the use of child-management skills by parents in the treatment group, when compared to those in the control group. Although the greatest improvement was in the area of child-management skills, there were sig-

nificant ( $p < .05$ ) mean differences between the groups from pretest to follow-up for the number of child-related behavior problems, and the intensity of child problems. Correlations were also computed among the four dependent measures, and showed that reduction in child-rearing problems correlated significantly with parental use of the child-management procedures. In addition, high frequencies of child-rearing problems in the control group correlated significantly with the parents' lack of skill in managing their children.

The combination of the class and individualized instruction, as found in this study, may be a particularly important treatment approach for abusive families who may benefit from the group experience (gaining support from other parents and learning better how to manage children) and yet also require individual training. Embry and Baer (1979), in a study that tested generalization of child-management skills from a parent-training class to the home, found that few parents (abusive, at risk, and normal families) generalized the skills to the home setting on their own, and yet with training were able to apply those skills in the home. This study and the one by Wolfe et al. (1981) lend further support to the utility of home-based treatment programs.

Another study by Wolfe and Sandler (1981) used a parent-training component similar to the program described in the previous investigation (Wolfe et al., 1981), but added a contingency-contracting procedure involving contingently rewarding a parent for using a specific child-management technique for 1 wk. The two treatment procedures were introduced individually, and then combined in terms of a two-variable withdrawal design (Hersen & Barlow, 1976). Graphical data indicated that TAB scores across the three families during baseline ranged from 0 to 0.5 responses per minute (r/m) for the children and 0.5-3.5 r/m for the parents, and dropped during treatment to a range of 0-2.0 for both children and parents, with most treatment entries at zero or 1.0 r/m or less. There

were no apparent differences in the effectiveness of the treatment procedures.

In a study by Wolfe, St. Lawrence, Graves, Brehony, Young, Bradlyn, and Kelly (Note 2), an abusive parent with three children was trained in the clinic to engage in two separate tasks with her children: a compliance interaction (the mother was asked to have the children pick up 50 toys scattered in the observation room and place them in containers), and a cooperative interaction task (the mother was asked to help her children color and draw pictures for a 10-min period). A bug-in-the-ear device was used and allowed the therapist to instruct the mother from behind a one-way mirror as she interacted with her children. The parent-training procedures were similar to those described in previously reviewed studies (e.g., Wolfe & Sandler, 1981; Wolfe et al. 1981).

Training in positive behaviors resulted in increases in positive parental prompts that were maintained during the fading period (bug removed) and at a 1-mo follow-up. In addition to the clinic training, the experimenters also conducted home observations of compliance and cooperative tasks to probe for generalization of parenting skills. Although no training occurred during these sessions, there were further reductions in hostile parental prompts and increases in positive parental prompts. One-month follow-up data collected in the home demonstrated continued reductions of hostile behaviors, but also a drop in positive behaviors.

Recent work by Wahler and his colleagues (Wahler, 1980; Wahler, Leske, & Rogers, 1979) has provided a different picture of the maintenance of treatment on low-income, socially isolated (called "insular" by Wahler), poorly educated families in Tennessee. In this study, 18 mother-child dyads were observed for a 30-min period twice weekly. At the end of each home visit, the observer obtained self-report data on the parent's extra-family social interactions over the previous 24-hr period. The purpose of the Community Interaction Checklist (CIC) (Wahler et al., 1979) was to

test an hypothesis by the authors that there was an inverse relationship between the mothers' extra-family social contacts and problem interactions with their children. Specifically, Wahler and his colleagues speculated that on days during which the mothers had a higher proportion of contacts with friends, fewer mother-child problems would occur, whereas on days marked by a lower frequency of friend contacts, there would be more mother-child problems.

Family treatment consisted of the therapist (a) explaining how aversive interactions develop (cf. Patterson's coercion hypothesis, 1974), (b) describing a strategy to remedy the interaction problems through the use of time-out, ignoring, and point systems, and (c) modeling the procedures. The therapists, different from the observers, visited the families once per week during baseline and treatment. Observational data never were collected during the therapists' visits. The effectiveness of the treatment program was marked by statistically significant ( $p < .01$ ) reductions in both mother and child aversive/oppositional behaviors from baseline to treatment. Unfortunately, during the follow-up visits (which took place twice a month for 1 yr), the parents and children demonstrated increases in their aversive/oppositional behaviors that were almost identical to baseline levels.

The Community Interaction Checklist data provided correlational support for Wahler's hypothesis—on high-friendship days, mother contacts with the target child were less aversive and the child's oppositional behavior was lower. On low-friendship days, child opposition and mother aversive behaviors were both high. The effectiveness of the parent-training program with these insular families was evident from the data that were reported; however, these improvements in parent-child functioning did not persist during follow-up, contrary to the results of other parent-training studies that have documented maintenance of treatment effects (e.g., Patterson & Fleishman, 1979) sometimes for as long as 2 yr (Wahler, 1971). To explain this,

Wahler (1980) postulated that the sample of "insular" mothers was quite different from parents in previous parent-training studies and that extra-family contacts may have a profound effect on a mother's child-rearing practices. Although Wahler based this inference on correlational data obtained from parent self-reports, his results suggested that social contacts may be another important variable in treating some abusive families. Moreover, numerous researchers (e.g., Elmer, 1967; Garbarino, 1977) have reported a strong link between abusive parenting patterns and social isolation, lending further support to Wahler's hypothesis.

### CURRENT ISSUES AND FUTURE DIRECTIONS

Future research might take three directions: (a) develop a theory of child abuse, (b) improve research methodologies, and (c) analyze certain ethical issues pertinent to research with abusive populations.

#### *Theory*

Perhaps the dearth of empirical literature about the treatment of child abuse stems from an inadequate or poorly conceptualized theory of the problem. Most of the authors reviewed in this manuscript identified abusive behaviors and designed programs to remedy those behaviors. Burgess (1978), Dubanoski, Evans, and Higuchi (1978), and Friedman, Sandler, Hernandez, and Wolfe (1981) are examples of the very few authors who attempted to assess child abuse within a social-learning framework of child development. Friedman et al. (1981) offered a functional analysis of child abuse, by focusing on the stimulus situation, the individuals involved, the responses, the contingencies, and the consequences. Traditionally, the focus of most research has been on identifying only the antecedent stimulus events and the characteristics of the abusive parents or caretakers, with little attention given to the abusive response, or

to the contingencies and consequences affecting the parent's or child's behavior. Doing so leaves several missing links. For example:

1. Many researchers have focused on the abusive parent and neglected to include the child as a potentially important participant in programs aimed at reducing abusive interchanges. Most of the research data on abused children have been demographic in nature, focusing on the physical characteristics of infants and children that appear to make them more prone to abuse: prematurity, low birth weight (Elmer & Gregg, 1967; Klein & Stern, 1971); serious illness of the child in the first year of life (Elmer & Gregg, 1967); and the presence of handicapping conditions, such as mental or physical defects (Farber & Rykman, 1965; Tizard & Grad, 1961). Recently, investigators have considered how behavioral characteristics of abused children may prevent successful family relationships and ultimately lead to abuse. These researchers have identified some of the salient child behaviors that are exhibited by abused children, which include complaints, aggression (Burgess, 1978), noncompliance, opposition (Wahler, 1980), and crying, teasing, humiliation, destructiveness, and negativism (i.e., the Patterson Coding System). Clearly, if abuse is to be more fully understood, the role of the child in eliciting abuse needs to be explored more fully, and intervention programs need to focus on both parent and child behaviors.

2. Many studies have measured both parent and child behaviors but have not addressed the *interactive* nature of abuse. Child abuse is an interactive process between parent and child; chains of behavior—the stimulus events, the behaviors, and the consequences—are intertwined between parent and child. The view of the parent or the child as solely responsible for abuse has begun to give way to observation of parent-child interactions.

3. A critical question in the observation of parent-child interactions is identifying the specific correlate behaviors that lead to and accom-



pany abuse. Several investigators have noted that direct observation of abuse is difficult, if not impossible, due to its low frequency, its private nature, and its illegality (Burgess, 1978; Wolfe & Sandler, 1981). Therefore, researchers have been forced to identify higher frequency behaviors that are correlates and antecedents of abuse that can be observed and modified. The Patter-son Coding System contains 29 behavioral categories that lend themselves to empirical study, 14 of which (Total Aversive Behaviors) have been rated by parents as being highly aversive: crying, negative commands, dependency, destructiveness, disapproval, excessive rates of such behaviors, humiliation, ignoring, negativism, noncompliance, physical negatives, teasing, whin- ing, and yelling. Composite summaries of TAB scores have proved helpful in distinguishing abusive, neglectful, and normal families (Reid et al., 1981); even so, additional dependent variables measuring *effective* parenting skills (praise, attention to appropriate child behavior, use of time-out, shaping, and extinction) need to be included in the list of parent behaviors targeted for change. Another important, although unanswered, question is how to identify correlate parent and child behavior that produce stronger parent/child bonds (e.g., com-pliance, positive comments, smiles). Some au- thors have begun to study this class of behaviors (e.g., Crozier & Katz, 1979; Sandler et al., 1978; Wahler, 1980; Wolfe et al., Note 2). Currently, most professionals agree about the need to teach abusive parents new parenting skills; it is the specific behaviors to modify or build, in both parents and children, that warrent further in- vestigation.

### *Methodology and Design*

The treatment of child abusers has only re- cently come under the purview of behavioral psychologists, and the pioneers in this area of research have made significant contributions to it. However, certain methodological weaknesses are apparent in the literature, which suggest that

their conclusions should be accepted cautiously until additional, methodologically stronger stud- ies can be conducted. At least five weaknesses exist:

1. The literature contains poor definitions of the abuse populations. Traditionally, behavioral treatment programs for nonabusive families have proved very successful in altering aberrant par- ent-child interactions (Berkowitz & Graziano, 1972; O'Dell, 1974; Reisinger, Ora, & Frangia, 1976). However, implementation of these pro- cedures with some abusive populations has been less successful (Wahler, 1980), suggesting that there are additional variables that differentiate abusive from nonabusive families. Typically, only cursory demographic information (e.g., sex, socioeconomic status, ages of parents and chil- dren) has been provided, greatly limiting com- parisons and generalization of findings across studies. When researchers have looked at these populations more thoroughly, a wide range of descriptors has been found; for example, abu- sive parents were abused as children (Melnick & Hurley, 1969; Schneider, Hoffmeister, & Helfer, 1976); have severe deficits in parenting their children (e.g., Young, 1964); exhibit more negative behavior (e.g., threats, disapproval, physical punishment) (Burgess & Conger, 1978) than nonabusive parents; are socially isolated from contact with friends, neighbors, and social organizations and tend to seek interpersonal con- tact within their immediate families (Wahler, 1980); and exhibit higher rates of unstable mar- riages and divorce (Kempe, Silverman, Steele, Droegemueller, & Silver, 1962; Spinetta & Rigler, 1972), inadequate housing (Birrell & Birrell, 1968; Gil, 1970) and unemployment (Gil, 1970; Young, 1964)). Many variables correlate with abusive parenting practices; if measures of these variables were included in all reports, comparisons across studies would be enhanced.

Another question that poses a serious prob- lem in defining abusive parents involves the manner in which participants are selected for

research projects. In the 11 studies in which data were presented (see Table 2), the participants were selected by techniques including court-ordered (two studies), referral by child protection organizations (five studies), referral by other mental health agencies (two studies), and unknown methods (two studies). Due to definitional discrepancies, the necessity of having to rely on correlated behaviors (e.g., yelling, threatening), rather than being able to observe abuse itself, and the problem of selection bias on the part of referral sources, it is quite possible that the information available on abusive parents comes from biased samples that do not represent the population of maltreating families. For example, in order to study parent-child interactions, researchers in 8 of the 11 home-based studies that presented parent-child observational data could not include families whose children had been removed from the home. In addition, it is possible that people who volunteer or agree to participate in child-abuse research represent a sample very different from those parents who are court adjudicated.

2. Other weaknesses in the behavioral literature are the lack of outcome data (for 9 of the 20 studies reviewed) and, where data were presented, the choice of the dependent variables (for both parents and children) that were, in some cases, limited and poorly measured. For example, level of enjoyment when interacting with the child (Gilbert, 1976) and tolerance of child's crying (Sandford & Tustin, 1974) were the only dependent variables measured in these two studies. Although both behaviors may be important and relevant for the participating families, changes in these variables alone may not change the parents' abusive behaviors. Furthermore, the authors' reports were anecdotal rather than data-based. Another problem found in two other studies was the use of parent report as the only source of data for one study (Gilbert, 1976) and as a secondary source in another (Wahler, 1980). Although parent reports may be useful, especially if observational data are collected too, previous research has

found low reliability of self-reports (e.g., Cavior & Marabotto, 1976; Lipinski & Nelson, 1974). Wahler (1980) included self-reports of the parents' community interactions (via the Community Interaction Checklist, CIC), along with observational data in his report; however, no reliability estimates of the self-report data were obtained. Wahler noted the need to verify parent information collected on the CIC, yet no method had been devised when his study was published.

3. The lack of useful reliability data constitutes additional weaknesses in the methodologies of several of the data-based reports. In 2 of the 11 studies no reliability data were presented, and in 2 other studies, estimates for only some of the dependent variables were presented (Sandler et al., 1978; Jeffery, 1976). In addition, four other investigators reported only an overall reliability, with no separate estimates for specific dependent measures. Only the studies by Jeffery (1976), Wolfe et al. (1981), Wolfe and Sandler (1981), and Wolfe et al. (Note 2), presented a partial or complete list of reliability for each behavior or behavioral class. The presentation of reliability estimates for each dependent variable could assist future investigators in their efforts to identify and define salient behaviors.

4. The need for long-term follow-up of abusive families seems obvious, and yet not all investigators conducted follow-up visits to assess the maintenance of successful, or at least adequate, parent-child relationships. In fact, the importance of follow-up was not even mentioned in some of the articles summarized in this review, and, when it was mentioned, there often were vague and general comments about the *need* for follow-up with no mention of *how* to conduct follow-up checks systematically and *what* to assess as the important variables.

Follow-up of abusive parents participating in behavioral treatment programs was done in 8 of the 11 studies included in this review, ranging in length from a few weeks (Jeffery, 1976) to 12 mo posttreatment (Wolfe & Sandler,

1981). In one study (Denicola & Sandler, 1980), the authors collected follow-up data but did not report how long after treatment the visits were made.

Follow-up is a critical element in any program that attempts to maintain change in behavior patterns in abusive families. The fact that some researchers believe that deviant parenting practices are passed on from generation to generation (Curtis, 1963; Gelles, 1973; Kempe & Kempe, 1978; Spinetta & Rigler, 1972)—frequently labeled the “cycle of abuse”—suggests that long-term follow-up is needed, not only to ensure that parents continue to maintain the changes brought about by specific treatment programs, but also to ensure that abusive behavior patterns do not recur in later generations.

5. The question of how to demonstrate experimental control of behavior is always crucial in empirical research. A multiple-baseline design was used in one study (Wolfe et al., Note 2); two other studies used group designs (Reid et al., 1981; Wolfe et al., 1981); and A-B designs were used in the eight remaining investigations. The A-B design has the obvious weakness of being sensitive only to abrupt changes in behavior, and even then does not strongly establish that the change was due to the experimental manipulations rather than coincidental extraneous variables (Risley & Wolf, 1973). Group designs have limitations. Although they have been used to demonstrate a causal relationship between dependent and independent variables, typically only pre- and posttreatment measures have been taken, without including the vital analysis of behavior change over time. In addition, with group designs there is always the problem of selecting subjects for comparison groups, a major weakness in past (primarily nonbehavioral) research.

Single-subject designs, A-B-A-B reversal and multiple-baseline design (Baer, Wolf, & Risley, 1968), may be the most appropriate designs when there are small populations or when suitable comparison groups are not available. These

designs allow experimenters to see changes in behaviors over time, to note rapid or gradual changes, and to make judgments about the need for additional manipulations if the desired change does not occur. The A-B-A-B design may be potentially dangerous with this population (allowing abuse or negative interaction patterns to recur during the reversal conditions), although it may prove to be useful with parents who exhibit less severe behaviors or are under less stress.

Choice of design is often dictated by the size and composition of a population, the experimenter's training and background, and ethical considerations. Although the restraints in conducting research with abusive families are many, they are not insurmountable. As noted by Resick and Sweet (1979) “it is not impossible to conduct sound research on the topic [child abuse]. It does mean that quasi-experimental designs are likely to be more prevalent than true experiments in this area” (p. 151).

### *Ethical Considerations*

Single-subject designs, requiring the collection of baseline data, present researchers with additional problems. First, abuse or aversive parent-child interactions may be so problematic that investigators decide to forego the collection of baseline data and begin treatment immediately. Obviously, not all abusive families present relationships dysfunctional enough to obviate the collection of baseline data; however, when such a family is included in a research project the investigator is mandated by law in all 50 states (Kempe & Helfer, 1972) to report the incident. This introduces a second problem facing the investigator: being required to report abusive interactions observed during baseline (or intervention) sessions while attempting to develop a therapeutic relationship with the client. Researchers/clinicians who inform the parents during initial meetings of their legal obligation to report abusive behaviors they observe may severely bias the data they collect, limit treatment outcomes with a parent who may become

guarded or mistrustful of the therapist, or have parents drop out of the study or decide not to participate. Clearly, a major role of any researcher working with this population is to protect the abused child. The problem of simultaneously protecting the child, observing legal mandates, and treating abusive parent-child interactions is a very real and sensitive issue, and one seldom addressed in the literature.

### SUMMARY

Child abuse has probably existed as a social problem as long as parents and children have lived under the same roof, and in recent years it has received tremendous attention. Most of the research has focused on etiology rather than treatment, leaving large gaps in our knowledge about remediating abuse. Behavioral scientists have only begun to formulate a conceptual framework from which to work. Many theoretical questions are yet unanswered, particularly the question of what constitutes abuse. Burgess (1978) believes that conceptual problems exist because abuse falls along a continuum of parent-child relationships—a continuum that at one end might include verbal punishment (e.g., threats, ridicule) or milder forms of physical punishment (e.g., slap on the hand, spanking), and at the other end include extreme forms of physical punishment that exceed community mores (for example, hitting a child with a closed fist, scalding a child in hot water, torturing or killing a child). Thus, the question—where does discipline stop and abuse begin?—faces every researcher who must operationally define abuse.

Identifying the consequences of abuse in a child's development is another area of inquiry that remains untested. Most of the literature is filled with the subjective impressions of professionals speculating that abused children become the juvenile delinquents and the child abusers of the future; however, as yet no longitudinal studies have been conducted that compare the

developmental outcomes of abused and non-abused children from early childhood to later adulthood. What if there were no differences? How might this influence our approaches to the treatment of abuse? Answers to these and other questions will take years of study.

Increased awareness of the problem of child abuse has led to greater efforts to remediate the problem. Treatment efforts with abusive families are still in the initial stages, but, undoubtedly, information from these early programs can be the foundation for future researchers to formulate new, more effective intervention programs. Future researchers should focus on identifying those aspects of existing programs that lend themselves to empirical study and have led to more successful parent-child relationships.

Without this type of systematic experimental intervention, little solid information will be available on which to make policy decisions for the establishment of statewide and countrywide programs of abuse control (Parke & Collmer, 1975, p. 581).

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