

Child Maltreatment

<http://cmx.sagepub.com/>

Parent-Child Interaction Therapy with a Family at High Risk for Physical Abuse

Joaquin Borrego, Jr., Anthony J. Urquiza, Rebecca A. Rasmussen and Nancy Zebell

Child Maltreat 1999 4: 331

DOI: 10.1177/1077559599004004006

The online version of this article can be found at:

<http://cmx.sagepub.com/content/4/4/331>

Published by:



<http://www.sagepublications.com>

On behalf of:



American Professional Society on the Abuse of Children

Additional services and information for *Child Maltreatment* can be found at:

Email Alerts: <http://cmx.sagepub.com/cgi/alerts>

Subscriptions: <http://cmx.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://cmx.sagepub.com/content/4/4/331.refs.html>

>> [Version of Record](#) - Nov 1, 1999

[What is This?](#)

Parent-Child Interaction Therapy With a Family at High Risk for Physical Abuse

Joaquin Borrego, Jr.

Anthony J. Urquiza

Rebecca A. Rasmussen

Nancy Zebell

University of California, Davis Medical Center

The use of empirically validated treatments with physically abusive and at-risk families continues to be an issue requiring further clinical and research attention. This single-case study discusses the effectiveness of Parent-Child Interaction Therapy (PCIT) with a mother-child dyad considered to be at high risk for physical abuse. Although PCIT is effective with different populations and in different settings, no study to date has demonstrated the effectiveness of PCIT with physically abusive families or families at risk for physical abuse. Data are presented from behavioral observations and standardized measures. Results suggest that PCIT was effective in reducing the child's behavior problems and the mother's stress, and increasing the number of positive parent-child interactions. Finally, implications for future clinical and research work on physically abusive and at-risk families are discussed.

Although child physical abuse continues to be an increasing social problem that receives considerable attention in the social sciences (e.g., Emery & Laumann-Billings, 1998; Kolko, 1992; Milner & Chilamkurti, 1991), little research has incorporated validated treatments on physically abusive parent-child families (Urquiza & McNeil, 1996). Much of this research has focused primarily on describing abusive families and the consequences of child abuse (Kolko, 1992; Wolfe, 1987). Numerous interventions have been used with physically abusive parents, with most interventions pointing to promising results (Azar, 1991; Urquiza & McNeil, 1996). Traditionally, treatment has focused on teaching parents child management techniques (Crozier & Katz, 1979; Wolfe, Sandler, & Kaufman, 1981), self-control (Denicola & Sandler, 1980), anger manage-

ment (Nomellini & Katz, 1983; Whiteman, Fanshel, & Grundy, 1987), and social skills (Fantuzzo, Wray, Hall, Goins, & Azar, 1986). Very few studies have actually worked directly with both the parent and child as the focus of treatment (e.g., Crimmins, Bradlyn, St. Lawrence, & Kelly, 1984; Wolfe et al., 1982).

Although there are neither stable nor consistent characteristics of physically abusive adults and physically abused children, physically abusive parents often have chronic problematic relationships with their children (Urquiza & McNeil, 1996), they interact less (Burgess & Conger, 1978), and they have more negative (Reid, Taplin, & Lorber, 1981) and fewer positive interactions with their children (Kavanagh, Youngblade, Reid, & Fagot, 1988). Milner and Chilamkurti (1991), in their review of the literature, list several factors that may contribute to a parent abusing his or her child (e.g., demographics, child abuse history, inappropriate child expectations, parent-child interactions, and parent discipline strategies). Kolko (1992) offers a complementary review of the literature on physically abused chil-

Authors' Note: This research was supported in part by NIMH Grant MH54221 R21 and funding from the Sierra Health Foundation. The authors wish to thank Eric C. Vargas, Babli K. Sandhu, Christina Juarez, Dawn M. Blacker, and Lisa M. Whitney for their time and effort in transcribing and coding segments of each coding session. The authors would also like to express their appreciation for Sherri Y. Terao and Kimberly Reed for their editorial comments. Correspondence regarding this article should be addressed to Joaquin Borrego, Jr., Child Protection Center, Department of Pediatrics, University of California, Davis Medical Center, 3300 Stockton Blvd., Sacramento, California 95820. E-mail may be sent to jborrego@ucdavis.edu

CHILD MALTREATMENT, Vol. 4, No. 4, November 1999 331-342
© 1999 Sage Publications, Inc.

dren. As with parents, there are no consistent characteristics for physically abused children; however, a common characteristic is aggression toward others (Wolfe & Moske, 1983).

The absence of positive parent-child interactions seems to distinguish physically abusive parents from nonabusive ones (Milner & Chilamkurti, 1991; Wolfe, 1987), as physically abusive parents are more likely to engage in less effective and more aversive discipline strategies than nonabusive parents (Lahey, Conger, Atkinson, & Treiber, 1984; Monroe & Schellenbach, 1989). These parents use fewer positively oriented discipline techniques and rely more on power assertion techniques such as threats (Oldershaw, Walters, & Hall, 1986), have greater negative expectations of their child's behavior (Schellenbach, Monroe, & Merluzzi, 1991), and have a greater acceptance of corporal punishment as an effective means of child discipline (Kelly, Grace, & Elliot, 1990; Trickett & Susman, 1988).

Social Learning Framework

Most physically abusive relationships can be understood using a social learning framework (Urquiza & McNeil, 1996). For instance, Patterson and colleagues (Patterson, 1975, 1976a, 1976b, 1982; Patterson, DeBarryshe, & Ramsey, 1989) developed a framework to explain the interchange of parent-child behaviors that contribute to problematic child behaviors. Patterson (1975; 1976a; 1976b; 1982) proposes a coercion hypothesis to account for the development and maintenance of a disrupted parent-child relationship. Briefly, certain conditions (e.g., failure to reinforce appropriate behavior) can perpetuate a child's continuous use of aversive behaviors, resulting in behavioral escalation. For example, a parent might give a command with which the child will either comply (ending the command) or not comply (e.g., usually accompanied by other negative behaviors such as a whine, yell, or cry). This noncompliant behavior may end the parent's command, and the child learns to repeat or escalate negative attention-seeking behaviors to end unwanted commands. The parent, in turn, either withdraws the command (negatively reinforcing the behavior) or responds with coercive behaviors (e.g., yelling).

Urquiza and McNeil (1996) extend this paradigm to physically abusive parent-child relationships in which some parents may resort to physical abuse to get compliance. The child responds to the parents' escalated behavior by complying; thus, it negatively reinforces the parent's coercive behavior. It is this basic pattern of coercive parent-child interactions that may help explain physically abusive parent-child relationships, although a more comprehensive framework of child

physical abuse would also include a range of contextual variables (e.g., history of abuse, developmental issues, different cultural parenting practices, and societal tolerance of abuse toward children).

PCIT

PCIT is a two-stage operant model for modifying maladaptive interactional patterns between parents and their young children by teaching parents to use differential reinforcement by providing positive consequences for appropriate behaviors (e.g., getting a praise after compliance) and negative consequences for inappropriate behavior (e.g., ignoring whining, time-out for noncompliance) (Eyberg & Boggs, 1989; Eyberg, Boggs, & Algina, 1995; Eyberg & Robinson, 1982; Hembree-Kigin & McNeil, 1995). By incorporating a developmental framework, PCIT emphasizes the importance of play therapy techniques as a mechanism for promoting positive relationships between parents and their children. In turn, PCIT uses social reinforcement between the therapist, the parent, and the child in bringing about positive behavior change (Borrego & Urquiza, 1998).

Essentially a parent training program, PCIT contains an intensive positive-interaction training component, incorporates parent and child within the treatment session, changes the pattern of dysfunctional parent-child relationships, and involves the use of live coaching (Eyberg & Robinson, 1982). PCIT is conducted in two phases: Child-Directed Interaction (CDI) or the Relationship Enhancement Phase, and Parent-Directed Interaction (PDI) or the Discipline Phase. In CDI, parents are coached to use specific, positive skills and relationship-enhancing skills (e.g., statements and behaviors), including the following: descriptions (provide a verbal description of the child's appropriate play), reflections (repeat verbatim or paraphrase an appropriate verbal statement of the child), imitation (copy appropriate child behaviors), and praising (provide positive verbal statements for appropriate behavior or verbalizations or both) (for a more comprehensive discussion of PCIT coaching concepts, see Eyberg, 1988; Hembree-Kigin & McNeil, 1995). Once parents meet completion criteria for CDI, the PDI portion of PCIT is introduced. During the PDI didactic, parents are taught to use clear, positively stated, direct commands, and to consistently follow through with consequences for behavior (e.g., praise for compliance, time-out for noncompliance; Urquiza & McNeil, 1996). Preliminary data from our research lab comparing abusive and nonabusive mothers (both with children with behavior problems) suggest that direct commands are more effective in gaining compli-

ance from children with behavior problems than commands that are either asked in question form or are implied (Borrego, Urquiza, & Timmer, 1999). The treatment is considered successful when the child is consistently compliant with direct and clear commands that are given by the parent, and when the parent is able to successfully and consistently follow through with the appropriate consequences.

Treatment studies have shown PCIT to be effective in decreasing child behavior problems (e.g., Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993; Eyberg, 1988; Eyberg & Robinson, 1982; McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991). There are no studies that document the effectiveness of PCIT with parent-child relationships that have a risk or history of physical abuse. As argued elsewhere (e.g., Urquiza & McNeil, 1996), PCIT is a suitable treatment for physically abusive families, as it focuses on the parent-child relationship by increasing positive and decreasing negative interactions. Because abusive parent-child relationships can be characterized by the low number of positive interactions (e.g., Burgess & Conger, 1978), PCIT is a good fit for this treatment population. In addition, the emphasis on the direct coaching of individual families may be more effective with at-risk or physically abusive families than group training or videotape modeling or both would be (e.g., Webster-Stratton, 1984, 1994), because PCIT is concrete (and thus suitable for low-functioning parents), nonblaming (which is a concern for parents who are in the child welfare system and thus may interfere with the therapeutic relationship), and relatively short in duration (14-week treatment program).

In this single-case study, we describe a family that was at high risk for physical abuse and referred to our medical center. We explain and discuss the specific effectiveness of PCIT with this family. Pretreatment, midtreatment, posttreatment, and follow-up data are presented. This study used both standard paper-and-pencil measures and behavioral observation methodology to document progress throughout the treatment.

METHOD

Participants

The family in treatment consisted of a 35-year-old single mother with prior Child Protective Services (CPS) involvement and her 3-year-old son. Although the mother had another child (age 4), he was not part of treatment. The mother was physician-referred to the Child Protection Center at the University of California Davis Medical Center after the mother had called in crisis, stating that she had spanked her son for being too

aggressive with his older sibling. The physician referred the client to the child welfare system to assess the risk of harm to the child. CPS made a home visit to investigate the incident and then referred the mother to the PCIT program. The mother reported that the spanking scared her into thinking that she could harm her son if she lost control of her temper.

During the initial intake session, the mother reported that her son had numerous behavior problems that included being self-destructive (e.g., head butting), being physically aggressive with his older brother (e.g., kicking), and having numerous temper tantrums (e.g., whining). The child's head butting was such a significant problem for the mother that he often wore a helmet at home. He also wore the helmet during the first few therapy sessions.

The child in therapy had fetal alcohol effects and his older brother was mentally retarded and had fetal alcohol syndrome (FAS). The mother had a history of being homeless and an alcoholic. Because of her prior CPS history (involving alcohol), her children having special needs (mental retardation and fetal alcohol effects), and her calling in crisis, she was considered to be at high risk for physical abuse.

Measures

Coding System

Dyadic Parent-Child Interaction Coding System (DPICS). The DPICS (Eyberg & Robinson, 1983) was designed to assess the quality of parent-child social interactions through observations of dyads in a clinical setting. In their standardization study, Robinson and Eyberg (1981) reported interrater reliabilities for different types of coders (e.g., psychologists, psychology interns, and graduate-level research assistants) that ranged from .67 to 1.0 (mean = .91) for parent behaviors and .76 to 1.0 (mean = .92) for child behaviors. Interrater reliability was assessed by correlating the frequency of each behavior that was recorded during the observations. The validity of the DPICS has been demonstrated in studies. It has correctly classified (via discriminant function analyses) 100% of normal families, 85% of treatment families, and 94% of all families (Robinson & Eyberg, 1981). Several additional studies have demonstrated the psychometric properties of the DPICS with other populations, including neglectful mothers (Aragona & Eyberg, 1981) and children with conduct disorders (Webster-Stratton, 1985). Bessmer and Eyberg (1993) have examined preliminary information on the DPICS categories. Although the DPICS has the potential to code many different types of behavior, only nine DPICS categories were coded for

TABLE 1: DPICS Parent and Child Codes

Parent codes	
Questions	A descriptive or reflective comment expressed in question form
Descriptions	A declarative sentence or phrase that gives an account of the objects or people in the situation, or the activity occurring during the interaction
Praises	A nonspecific (unlabeled) or specific (labeled) verbalization that expresses a favorable judgement on an activity, product, or attribute of the child
Child codes ^a	
Cry	Inarticulate utterances of distress (audible weeping) at or below the loudness of normal conversation
Yell	A loud screech, scream, shout, or loud crying; the sound must be loud enough so that it is clearly above the intensity of normal indoor conversation
Whine	Words uttered by the child in a slurring, nasal, high-pitched, falsetto voice
Smart talk	Impudent or disrespectful speech
Destructive	When the child destroys, damages, or attempts to damage any object
Physical negative	A bodily attack on or an attempt to attack the parent

a. Due to their low frequency, the six child codes were collapsed into a negative child behaviors category.

this study. Table 1 lists the codes that were used in this study.

Child Behavior Measures

Eyberg Child Behavior Inventory (ECBI). The ECBI measures behavioral problems that are exhibited by children with ages from 2 to 16 years (Eyberg & Ross, 1978). The inventory contains 36 behaviorally specific items (e.g., argues with parents about rules). Parents indicate the frequency of behaviors (intensity score) and whether they are considered to be problematic (problem score). The problem score can range from 0 to 36, and the intensity score can range from 36 to 252. Eyberg (1988) reviewed studies demonstrating the reliability and stability of the ECBI, as well as its validity and sensitivity to change following parent training. The ECBI has been standardized on a number of populations (Eyberg & Robinson, 1983; Eyberg & Ross, 1978), and it has been shown to provide a reliable and valid assessment of parents' perceptions about their child's behavior problems (Eyberg & Ross, 1978). The published cutoff scores for child deviancy are an intensity score of greater than 127 or a problem score of greater than 11.

Child Behavior Checklist-Parent Report (CBCL-P). The CBCL-P (Achenbach & Edelbrock, 1983, 1986) is a standardized instrument that lists 113 problem

behaviors that children from the age of 2 to 18 (one age group is 2 to 3 years old, and the other is 4 to 18 years old) may exhibit. The version that was used is completed by the parent. Separate norms are provided for both boys and girls in four age groups (2 to 3, 4 to 5, 6 to 11, and 12 to 16 years). Through a factor analytic design, the CBCL-P is composed of two broadband scales (internalizing and externalizing) and a range of narrowband scales for each age group and gender (e.g., depressed, somatic complaints, hyperactive, aggressive, etc.). In addition, the CBCL-P provides a social competence score. Achenbach, Edelbrock, & Howell, (1987) have provided extensive descriptions of the psychometric properties of the CBCL-P, which have resulted in this measure being one of the most frequently used for child behavioral problems and psychological adjustment.

Parent Measures

Child Abuse Potential Inventory (CAPI). The CAPI is a 77-item instrument developed by Milner (1986). The CAPI contains 10 scales. The physical abuse scale can be divided into six scales of different factors: distress, rigidity, unhappiness, problems with child and self, problems with family, and problems from others. In addition, the CAPI contains three validity scales: a lie scale, a random response scale, and an inconsistency scale. The CAPI has a third-grade reading level. In the CAPI manual, Milner (1986) provides a review of the psychometric properties of this measure with multiple types of respondents. Of relevance to this investigation, research has been conducted with physically abusive and at-risk parents. From these data, Milner reports split-half and KR-20 reliability coefficients for the CAPI abuse scale as ranging from .93 to .98 and .87 to .96, respectively (from several studies with a total of more than 2,000 parents, consisting of males and females, who are physically abusive, or neglectful, or at-risk, or are control subjects). In a series of studies, test-retest reliabilities are excellent for the CAPI Abuse scale (.91 for one day; .90 for one week; .83 for one month). Similar reliability performance is reported for the other clinical scales and validity scales. Milner and colleagues (Milner, Charlesworth, Gold, Gold, & Friesen, 1988; Milner, Gold, Ayoub, & Jacewitz, 1984; Milner, Gold, & Wimberly, 1986) have conducted numerous studies examining the validity of the CAPI. The abuse scale has been shown to correctly discriminate 82.7% of abusers and 88.2% of nonabused controls (Milner et al., 1986), and correlate with the Mental Health Index (Milner et al., 1988).

Parenting Stress Index (PSI). The PSI (Abidin, 1990) was designed to identify parent-child dyads who are

experiencing stress, and who may develop dysfunctional parenting and child behavioral problems. The index consists of 13 subscales grouped into a child domain (i.e., adaptability, acceptability, demandingness, distractibility or hyperactivity, mood, and reinforces parent), a parent domain (i.e., depression, attachment, restrictions of role, sense of competence, social isolation, relationship with spouse, and parent health), a life stress scale, and a total stress scale. In his manual, Abidin (1990) describes several studies that report psychometric data on the PSI. Alpha reliability coefficients for each scale have been determined, with child domain coefficients ranging from .62 to .70, parent domain coefficients ranging from .55 to .80, and the reliability coefficient for the total stress score being .95. In addition, Burke and Abidin (1980) provide extensive information about the validity of the PSI, including content validity, overall development of the measure, and the development of each scale. The PSI was selected for inclusion in this study because it has been shown to reflect a significant decrease in parental stress following PCIT in nonabusive families (Eisenstadt et al., 1993). High parent stress has been shown to play a role in being at risk for child physical abuse (Whipple & Webster-Stratton, 1991).

Procedure

As previously stated, the two phases of PCIT are CDI and PDI. Both phases are conducted in the context of an initial didactic training session with the parent, followed by coaching sessions with the parent and child in an observation room while the therapist coaches the parent with a bug-in-the-ear microphone device. In this case, the mother and child participated in five CDI coaching sessions and six PDI coaching sessions. Before each phase of therapy, and at both follow-ups, the mother and child were videotaped while conducting a structured observation using the DPICS. Frequency counts for parental and child behaviors were recorded during three 5-minute standard situations in which the degree of parental control was varied (i.e., child-directed play, parent-directed play, and cleanup). The mother-child dyad was videotaped for 5 minutes at the beginning of each session before any coaching began.

Coding

All DPICS coders were undergraduate or graduate students in psychology, and each coder was provided a didactic training of all DPICS codes and procedures. Acceptable coders were individuals who demonstrated familiarity with DPICS, coded a minimum of 10 5-minute segments, and reached at least 85% reliability

on DPICS codes (i.e., mean reliability for the last two coding tapes). Each 5-minute segment was coded by two coders who met and reached a consensus. The parental codes consisted of descriptions, questions, and praises, whereas the child codes were for any negative child behavior (e.g., whining, crying, yelling, smart talk, being destructive, and engaging in physically negative behaviors). Because of the low base rate of these six negative child behaviors individually, they were collapsed into one negative child behavior category. Reliability between coders was assessed as the number of agreements divided by the sum of the number of agreements and disagreements; the results gave a percentage agreement. A reliability checker was assigned to recode 20% of the transcripts. The mean reliability for the coders was 87%.

Treatment Integrity

When conducting psychotherapy outcome research, one concern is maintaining treatment integrity to ensure that the intervention was delivered as intended. This was accomplished in several ways. For one, the therapist (a psychologist) was adequately trained in PCIT, had seen numerous PCIT cases before this one, worked closely with the supervisor, and received weekly supervision and feedback from the project director. Second, all measures used in this study were standardized instruments. Third, the therapist followed a week-by-week treatment-session checklist that monitored intervention content completion tasks (e.g., focusing on praises for one particular segment in therapy).

RESULTS

Standard Measures

Table 2 shows the pretreatment, midtreatment, posttreatment, and the two follow-up scores for the ECBI, PSI, CAPI, and CBCL-P. There was a notable decrease in the mother's rating of the child's behavior problems as measured by the ECBI and CBCL-P. Regarding stress levels, there were *T*-score decreases on all three main scores—child domain, parent domain, and total stress as measured by the PSI. There was relatively little change in the CAPI throughout the treatment. The client remained well below the first clinical cutoff score of 166.

Observational Data

As shown in Figures 1 through 3, the number of praises and descriptions increased while the number of questions asked by the parent decreased as treatment progressed. One goal of PCIT is to decrease the

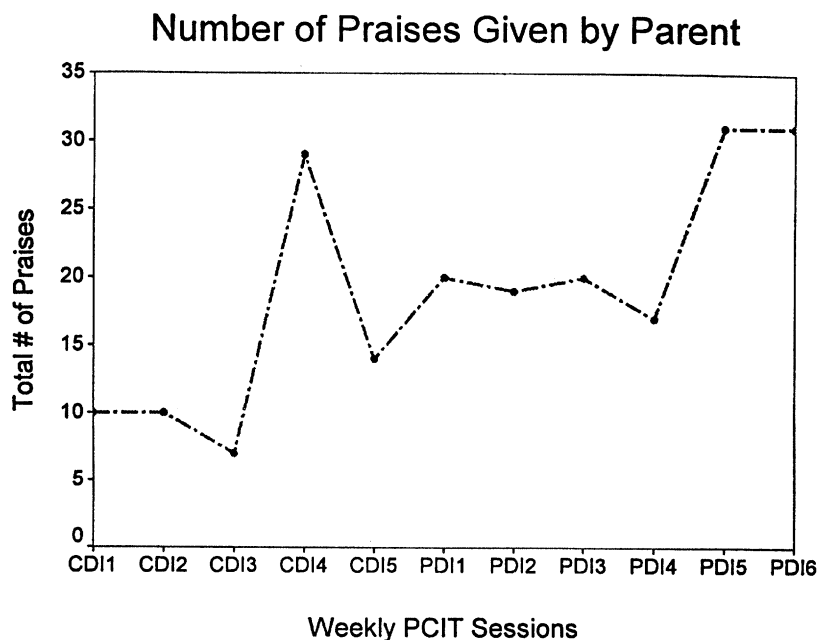
TABLE 2: Standard Measures: Pretreatment, Midtreatment, Posttreatment, and Follow-Up Scores

<i>Measures</i>	<i>Pretreatment</i>	<i>Midtreatment</i>	<i>Posttreatment</i>	<i>Follow-Up^a</i>	<i>Follow-Up^b</i>
Eyberg Child Behavior Inventory					
Intensity score	152	144	71	96	65
Number of problems score	14	11	0	3	0
Parental Stress Index (in percentages)					
Reinforces parent score	95	80	15	30	15
Child domain score	99+	97	69	75	50
Competence score	92	35	55	30	20
Parent domain score	75	30	25	20	12
Total stress score	94	75	40	40	24
Child Abuse Potential Inventory					
Abuse	74	64	56	84	56
Faking good VI ^c	no	no	yes	no	no
Child Behavior Checklist-Parent Report					
Externalizing behavior TS ^d	72	65	49	55	53
Aggressive behavior TS ^d	78	67	51	56	51
Destructive behavior TS ^d	63	61	50	54	59
Internalizing behavior TS ^d	76	65	51	51	46
Anxious or depressed TS ^d	73	63	55	52	50
Sleep problems TS ^d	50	51	50	52	50
Somatic problems TS ^d	64	67	55	50	56
Withdrawn TS ^d	74	67	50	54	50
Total TS ^d	74	66	51	60	51

a. 5-month follow-up.

b. 16-month follow-up.

c. VI = validity index.

d. TS = *T*score.**FIGURE 1: Total Number of Praises Given by Parent Over the Course of 11 Treatment Sessions**

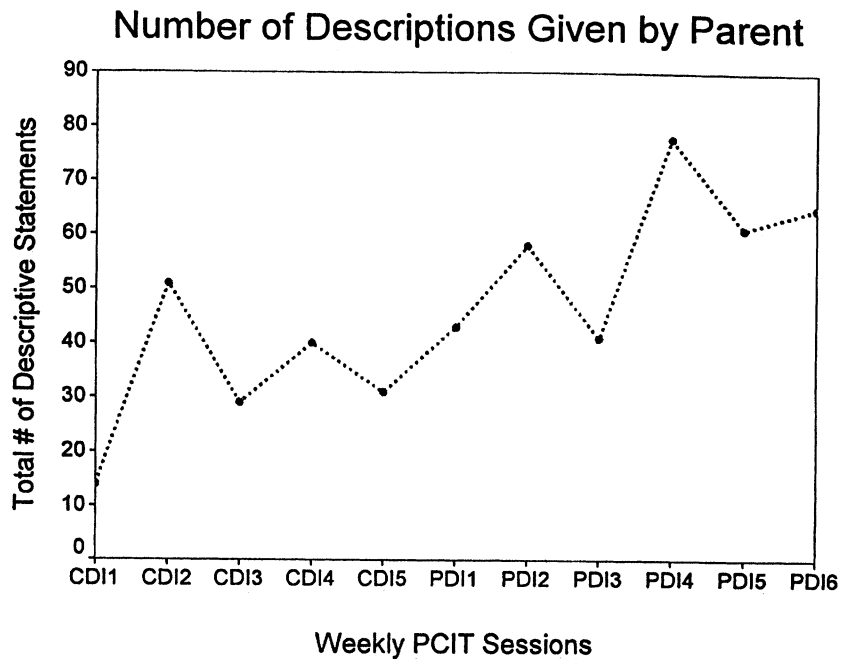


FIGURE 2: Total Number of Descriptions Given by Parent Over the Course of 11 Treatment Sessions

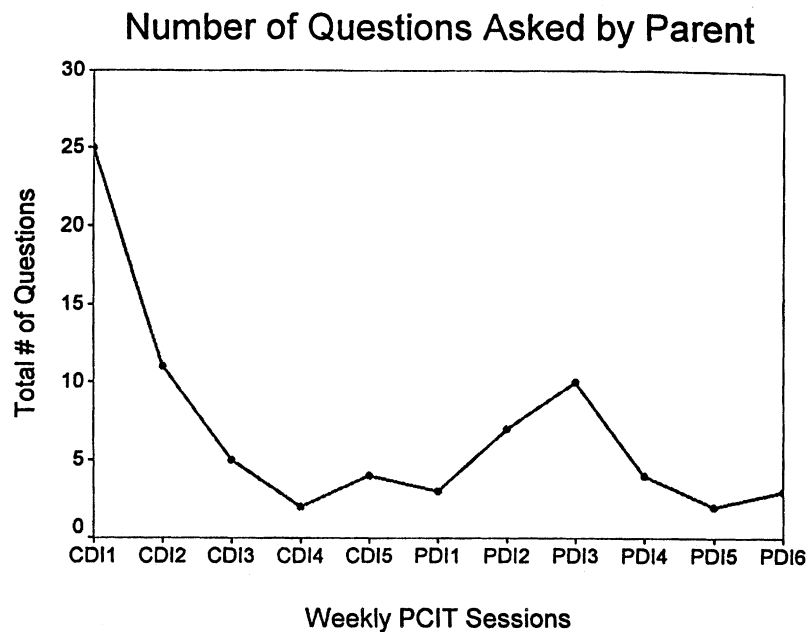


FIGURE 3: Total Number of Questions Asked by Parent Over the Course of 11 Treatment Sessions

number of questions during treatment as they are perceived as controlling the child's play (many questions are in the form of an indirect command) and may lead to negative interactions. Figure 4 shows promising data with regard to DPICS sessions at pretreatment, mid-treatment, posttreatment, and the two follow-ups. At

pretreatment, the mother had substantially more questions than descriptions or praises. As treatment progressed, the number of questions decreased while the number of praises and descriptions gradually increased. Concurrently, Figure 5 shows a gradual decrease in the child's negative behavior from pre-

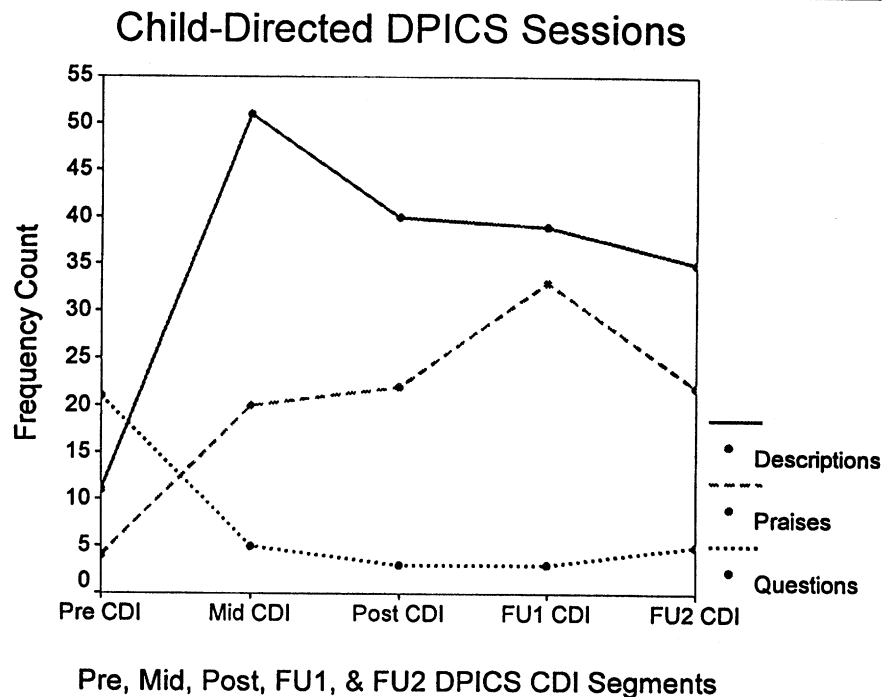


FIGURE 4: Total Number of Praises, Descriptions, and Questions Asked by Parent During Pretreatment, Midtreatment, Posttreatment, 5-Month Follow-Up (FU1), and 16-Month Follow-Up (FU2)

treatment to posttreatment, but it shows an increase during both follow-ups.

Commands and Compliance

One of the goals of PCIT is helping parents acquire discipline skills through the use of effective commands. The focus is on teaching parents to give commands that are simple and specific (i.e., direct commands), and to decrease the number of commands given that are either implied or asked in question form (i.e., indirect commands) and to increase the number of direct commands. For this study, we coded the number of direct commands that were given during the cleanup phase of the DPICS (this provides information as to how the parent issued commands and how the child responded). Child compliance was coded pre-DPICS (baseline data), post-DPICS, and at the 16-month follow-up. During the pre-DPICS, the mother gave 24 direct commands, and the child complied 29% of the time. At post-DPICS, the mother gave seven direct commands with a compliance rate of 43%. At the 16-month follow-up, the parent gave 12 direct commands with a compliance rate of 50%. The number of commands decreased while compliance rates increased. Developmentally, it is expected that children will not comply with all given commands. It can also be argued

that the parent had to give fewer commands to achieve compliance.

DISCUSSION

The results of this single-case study are promising in demonstrating the effectiveness of PCIT with a family at high risk for physical abuse. The effectiveness of treatment with this family can be seen through substantial changes in their observed interaction and in the mother's report of her child's behavior. Over the course of treatment, the mother learned to provide her child with a high level of praises (i.e., social reinforcement) as a means of increasing desired behaviors, such as complying when given a command, sharing, and talking in a "big-boy voice." As research indicates, abusive mothers interact less with their children (e.g., Burgess & Conger, 1978; Lahey et al., 1984), and one of the goals of PCIT was to increase the number of interactions between the mother and child. One way of accomplishing this goal was by increasing the use of descriptions by the mother. By describing what the child is doing, the mother focuses on the child's ongoing activities, and increases the chance of noticing and praising desirable behavior. In addition, the child decreased his negative behaviors such as crying, whining, and head butting. The child no longer had to wear

a helmet by posttreatment, and he was not wearing one when he was brought in for both follow-ups. Standard measures, completed by the mother at the end of treatment, suggested that her son had fewer problematic behaviors and that his few remaining behavior problems were less severe. Finally, the mother's subjective report was that she felt that PCIT had been helpful, so much so that she referred a friend to the program.

As with other studies (e.g., Wolfe et al., 1982) involving both the parent and child and using a bug-in-the-ear device, PCIT seems to be effective in extinguishing negative behaviors (e.g., child's whining, yelling, destructive behavior) and reinforcing appropriate behavior (e.g., praises given by the parent). In agreement with others (e.g., Azar & Pearlmutter, 1993; Urquiza & McNeil, 1996; Wolfe, 1987), we feel that approaches to treatment with physically abusive families should be parent-focused. However, interventions need to incorporate both parent and child to change abusive or coercive patterns in the relationship. A benefit of this study was the use of multiple-outcome criteria (i.e., standard paper-and-pencil measures and behavioral observation). This enabled us to examine different target behaviors through various methods.

One of the goals of PCIT is to change the way in which parent-child dyads interact, resulting in new interactions that are naturally reinforcing to both the parent and child. Although the direct measurement of the parent-child relationship is an arduous task for several reasons (e.g., lack of definition, epistemological differences), the PSI Reinforces Parent subscale points to the fact that the mother's interactions with her son became more reinforcing. The mother's sense of parenting competency, as measured by the PSI Competency subscale, improved throughout the treatment.

A note of caution should be addressed on how clinicians and researchers define *at risk* for physical abuse populations. The mother in this study scored well below the CAPI's first clinical cutoff score of 166 in each of her assessments (e.g., pretreatment, midtreatment, posttreatment, and the two follow-ups). For our purposes, she was defined as being at risk for physical abuse due to her prior history of CPS involvement, her calling in crisis because of fears of losing her temper with her child, and her children being identified as having special needs (due to the mental retardation and fetal alcohol effects). Previous literature has shown that certain child factors, such as medical or physical conditions (Smith & Hanson, 1974), cognitive and developmental difficulties (Friedrich, Einbender, & Leucke, 1983), and affective or emotional difficulties (Allen & Tarnowski, 1989), may put children at risk for abuse. Although the CAPI has been shown to be a reliable

and valid instrument, it should not be used as the sole or primary source for determining abuse potential. In doing a thorough assessment, we advocate a multimethod approach in which clinicians gather observational data, paper-and-pencil measures, and any other collaborative data (e.g., reports from spouses, teachers, and social workers).

There are several limitations with this study. For one, we have no information on the child's sibling. The sibling was not included in treatment and thus no information is provided on whether the mother applied these techniques with the sibling. However, research shows that PCIT treatment effects generalize to untreated siblings (Eyberg & Robinson, 1982). Another reason why we only focused on the one child is because she identified him as a problem, and research points to the fact that most physical abuse usually focuses on one child (e.g. Belsky, 1993; Wolfe, 1987). Another limitation of this study is that all treatment sessions occurred in the context of a playroom at a medical center. Because no home visits were made with this mother-child dyad, we do not know whether these improved behaviors and new patterns of interaction generalized to other settings such as the home environment. Some research has shown that PCIT generalizes across settings (Boggs, 1990; McNeil et al., 1991) and across time (Newcomb, Eyberg, Funderburk, Eisenstadt, & McNeil, 1990).

Figure 5 shows that the child's negative behaviors reached their lowest at posttreatment, but they increased at the 5- and 16-month follow-up. It is unreasonable to assume that any child, especially one considered to have special needs, would completely cease from engaging in negative behaviors (e.g., whining). The focus was on teaching the parent appropriate new ways of responding to the negative attention-seeking behaviors (e.g., either ignoring or following through with a time-out procedure if the behavior becomes aversive enough for the mother). It should be noted that during the 16-month follow-up DPICS taping, most of the child's negative behaviors were in the form of whining because he needed to go to the restroom. However, the pattern of continuing problems (even though less than at pretreatment) suggests that some type of periodic booster sessions may be necessary to complement this program.

This single-case study offers a model by which to conceptualize therapeutic change within a high-risk family. The treatment outcome data show that PCIT can be effective in changing parent-child relationships. To date, this is the first study to document the effectiveness of PCIT with a parent-child dyad at risk for physical abuse. Wolfe (1987) states that "it appears to be the

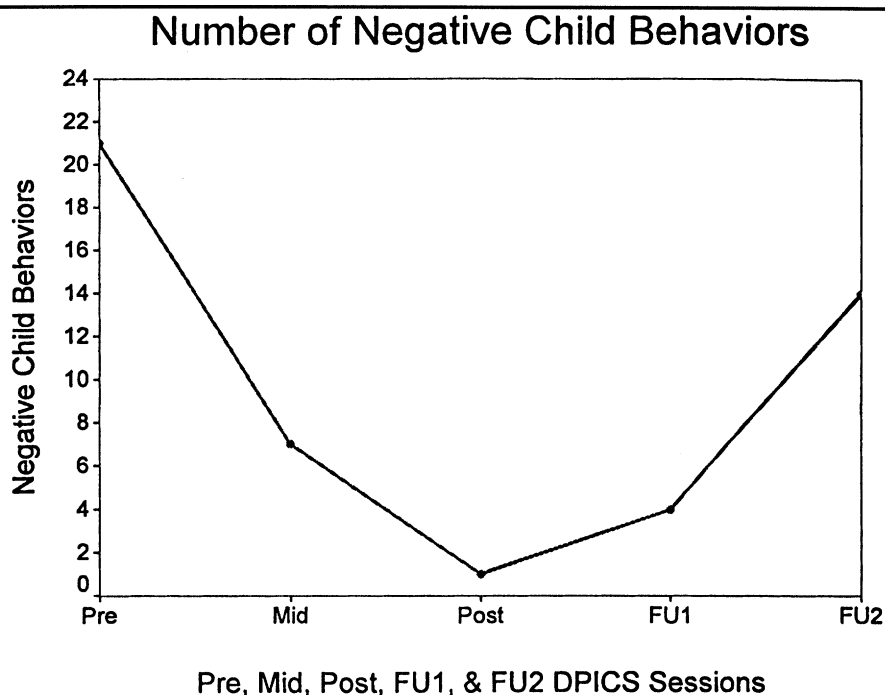


FIGURE 5: Total Number of Child Negative Behaviors During Pretreatment, Midtreatment, Posttreatment, 5-Month Follow-Up (FU1), and 16-Month Follow-Up (FU2)

relative absence of positive interactions that set[s] members of abusive families apart from matched, non-abusive controls rather than the dramatic display of open conflict and aggression" (p. 77). Given that physically abusive parent-child relationships are characterized by low rates of positive interactions (Milner & Chilamkurti, 1991), PCIT is a suitable treatment with physically abusive families, as it focuses on the parent and child and changes the relationship dynamics by increasing positive and decreasing negative parent-child interactions.

Research needs to move forward to augment the knowledge base of what we know about physically abusive and at-risk families. In the past, the research in this field has been characterized as providing descriptors of parents who abuse and the consequences of child abuse. Future research that examines physically abusive parent-child interactions may provide a greater understanding of these coercive processes and furnish possible treatment directions (Cerezo, 1997). Too often, the focus of treatment is with either the parent or the child alone. Although individual therapy (for either parent or child) has some benefits, it does not directly address the issue of changing the parent-child relationship (Borrego & Urquiza, 1998). In addition,

although paper-and-pencil measures offer a wealth of information, they still have their limitations. To make studies stronger, behavioral observation data could be incorporated with standard measurements of change, as observational data can offer useful information regarding parent-child relationships. A possible direction could be to observe and study the specific sequences of behavior that characterize physically abusive families (e.g., Borrego et al., 1999). With this line of research, we may be able to monitor the sequences of behavior that lead to an abusive or coercive action, then we can develop interventions that subvert these foundational maladaptive processes to decrease the families' physical abuse potential.

REFERENCES

- Abidin, R. R. (1990). *Parenting Stress Index* (3rd ed.). Charlottesville, VA: Pediatric Psychology Press.
- Achenbach, T. M., & Edelbrock, C. (1983). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. Burlington: University of Vermont.
- Achenbach, T. M., & Edelbrock, C. (1986). *Manual for the Teacher's Report Form and Teacher Version of the Child Behavior Profile*. Burlington: University of Vermont.
- Achenbach, T. M., Edelbrock, C., & Howell, C. T. (1987). Empirically based assessment of the behavioral/emotional problems of 2- and 3-year-old children. *Journal of Abnormal Psychology*, 15, 629-650.

- Allen, D. M., & Tarnowski, K. J. (1989). Depressive characteristics of physically abused children. *Journal of Abnormal Child Psychology*, 17, 1-11.
- Aragona, J. A., & Eyberg, S. M. (1981). Neglected children: Mothers' report of child behavior problems and observed verbal behavior. *Child Development*, 52, 596-602.
- Azar, S. T. (1991). Models of child abuse: A metatheoretical analysis. *Criminal Justice and Behavior*, 18, 30-46.
- Azar, S. T., & Pearlmutter, R. (1993). Physical abuse and neglect. In R. T. Ammerman, C. G. Last, & M. Hersen (Eds.), *Handbook of perspective treatments for children and adolescents* (pp. 367-382). Boston: Allyn & Bacon.
- Belsky, J. (1993). Etiology of child maltreatment: A developmental-ecological perspective. *Psychological Bulletin*, 114, 413-434.
- Bessmer, J., & Eyberg, S. M. (1993, November). *Dyadic Parent-Child Coding System-II (DPICS-II). Initial reliability and validity of the clinical version*. Paper presented at the AABT Preconference on Social Learning and the Family, Atlanta, GA.
- Boggs, S. R. (1990). *Generalization of the treatment to the home setting: Direct observation analysis*. Paper presented at the meeting of the American Psychological Association, Washington, DC.
- Borrego, J., Jr., & Urquiza, A. J. (1998). Importance of therapist use of social reinforcement with parents as a model for parent-child relationships: An example with parent-child interaction therapy. *Child and Family Behavior Therapy*, 20, 27-54.
- Borrego, J., Jr. (1999). *Behavioral observations of physically abusive parent-child relationships*. Unpublished master's thesis.
- Burgess, R. L., & Conger, R. D. (1978). Family interactions in abusive, neglectful, and normal families. *Child Development*, 49, 1163-1173.
- Burke, W. T., & Abidin, R. R. (1980). Parenting Stress Index (PSI)-A system assessment approval. In R. R. Abidin (Ed.), *Parent education and intervention handbook*. Springfield, IL: Thomas.
- Cerezo, M. A. (1997). Abusive family interaction: A review. *Aggression and Violent Behavior*, 2, 215-240.
- Crimmins, D. B., Bradlyn, A. S., St. Lawrence, J. S., & Kelly, J. A. (1984). A training technique for improving the parent-child interaction skills of an abusive neglectful mother. *Child Abuse and Neglect*, 8, 533-539.
- Crozier, J., & Katz, R. C. (1979). Social learning treatment of abuse. *Journal of Behavior Therapy and Psychiatry*, 10, 213-220.
- Denicola, J., & Sandler, J. (1980). Training abusive parents in child management and self-control skills. *Behavior Therapy*, 11, 263-270.
- Eisenstadt, T. H., Eyberg, S. M., McNeil, C. B., Newcomb, K., & Funderburk, B. W. (1993). Parent-Child Interaction Therapy with behavior problem children: Relative effectiveness of two stages and overall treatment outcome. *Journal of Clinical Child Psychology*, 22, 42-51.
- Emery, R. E., & Laumann-Billings, L. (1998). An overview of the nature, causes, and consequences of abusive family relationships. *American Psychologist*, 53, 121-135.
- Eyberg, S. M. (1988). PCIT: Integration of traditional and behavioral concerns. *Child and Family Behavior Therapy*, 10, 33-46.
- Eyberg, S. M., & Boggs, S. R. (1989). Parent training for oppositional preschoolers. In C. E. Schafer & J. M. Briesmeister (Eds.), *Handbook of parenting training: Parents as co-therapists for children's behavior problems*. New York: Wiley.
- Eyberg, S. M., Boggs, S. R., & Algina, J. (1995). New developments in psychosocial, pharmacological, and combined treatments of conduct disorders in aggressive children. *Psychopharmacology Bulletin*, 31, 83-91.
- Eyberg, S. M., & Robinson, E. A. (1982). Parent-Child Interaction Training: Effects on family functioning. *Journal of Clinical Child Psychology*, 11, 130-137.
- Eyberg, S. M., & Robinson, E. A. (1983). Conduct problem behavior: Standardization of a behavioral rating scale with adolescents. *Journal of Clinical Child Psychology*, 12, 347-354.
- Eyberg, S. M., & Ross, A. W. (1978). Assessment of child behavior problems: The validation of a new inventory. *Journal of Clinical Child Psychology*, 7, 113-116.
- Fantuzzo, J. W., Wray, L., Hall, R., Goins, C., & Azar, S. T. (1986). Parent and social-skills training for mentally retarded mothers identified as child maltreaters. *American Journal of Mental Deficiency*, 97, 135-140.
- Friedrich, W. N., Einbender, A. J., & Leucke, W. J. (1983). Cognitive and behavioral characteristics of physically abused children. *Journal of Consulting and Clinical Psychology*, 51, 313-314.
- Hembree-Kigin, T., & McNeil, C. B. (1995). *Parent-Child Interaction Therapy*. New York: Plenum.
- Kavanagh, K. A., Youngblade, L., Reid, J. B., & Fagot, B. L. (1988). Interactions between children and abusive versus control parents. *Journal of Clinical Child Psychology*, 17, 137-142.
- Kelly, M. L., Grace, N., & Elliot, S. N. (1990). Acceptability of positive and punitive discipline methods: Comparisons among abusive, potentially abusive, and nonabusive parents. *Child Abuse and Neglect*, 14, 219-226.
- Kolko, D. (1992). Characteristics of child victims of physical violence: Research findings and clinical findings. *Journal of Interpersonal Violence*, 7, 244-276.
- Lahey, B. B., Conger, R. D., Atkinson, B. M., & Treiber, F. A. (1984). Parenting behavior and emotional status of physically abusive mothers. *Journal of Consulting and Clinical Psychology*, 52, 1062-1071.
- McNeil, C. B., Eyberg, S. M., Eisenstadt, T. H., Newcomb, K., & Funderbunk, B. (1991). Parent-Child Interaction Therapy with behavior problem children: Generalization of treatment effects to the school setting. *Journal of Clinical Child Psychology*, 20, 140-151.
- Milner, J. S. (1986). *The Child Abuse Potential Inventory Manual* (2nd ed.). Webster, NC: Psytec.
- Milner, J. S., Charlesworth, J. R., Gold, R. G., Gold, S. R., & Friesen, M. R. (1988). Convergent validity of the Child Abuse Potential Inventory. *Journal of Clinical Psychology*, 44, 281-285.
- Milner, J. S., & Chilamkurti, C. (1991). Physical child abuse perpetrator characteristics: A review of the literature. *Journal of Interpersonal Violence*, 6, 345-366.
- Milner, J. S., Gold, R. G., Ayoub, C., & Jacewitz, M. M. (1984). Predictive validity of the Child Abuse Potential Inventory. *Journal of Consulting and Clinical Psychology*, 52, 879-884.
- Milner, J. S., Gold, R. G., & Wimberly, R. C. (1986). Prediction and explanation of child abuse: Cross-validation of the Child Abuse Potential Inventory. *Journal of Consulting and Clinical Psychology*, 54, 865-866.
- Monroe, L. D., & Schellenbach, C. J. (1989). Relationship of Child Abuse Potential Inventory scores to parental responses: A construct validity study. *Child and Family Behavior*, 17, 39-58.
- Newcomb, K., Eyberg, S. M., Funderburk, B. W., Eisenstadt, T. H., & McNeil, C. B. (1990, August). *Parent-Child Interaction Therapy: Maintenance of treatment gains at 8 months and 1 and 1/2 years*. Paper presented at the meeting of the American Psychological Association, San Francisco.
- Nomellini, S., & Katz, R. C. (1983). Effects of anger control training in abusive parents. *Cognitive Therapy and Research*, 7, 57-68.
- Oldershaw, L., Walters, G. C., Hall, D. K. (1986). Control strategies and noncompliance in abusive mother-child dyads: An observational study. *Child Development*, 57, 722-732.
- Patterson, G. R. (1975). *Families: Application of social learning to family life*. Champaign, IL: Research Press.
- Patterson, G. R. (1976a). The aggressive child: Victim and architect of a coercive system. In E. J. Mash, L. A. Hamerlynck, L. C. Handy (Eds.), *Behavior modification and families*. New York: Brunner/Mazel.
- Patterson, G. R. (1976b). *Living with children: New methods for parents and mothers*. Champaign, IL: Research Press.
- Patterson, G. R. (1982). *Coercive family process*. Eugene, OR: Castalia.
- Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist*, 44, 329-335.
- Reid, J. B., Taplin, P. S., & Lorber, R. (1981). A social interactional approach to the treatment of abusive families. In R. B. Stuart

- (Ed.), *Violent behavior: Social learning approaches to prediction, management, and treatment* (pp. 135-180). New York: Brunner/Mazel.
- Robinson, E. A., & Eyberg, S. M. (1981). The Dyadic Parent-Child Interaction Coding System: Standardization and validation. *Journal of Consulting and Clinical Psychology, 49*, 245-250.
- Schellenbach, C. J., Monroe, L. D., & Merluzzi, T. V. (1991). The impact of stress on cognitive components of child abuse potential. *Journal of Family Violence, 6*, 61-80.
- Smith, S. M., & Hanson, R. (1974). 134 battered children: A medical and psychological study. *British Medical Journal, 3*, 666-670.
- Trickett, P. K., & Susman, E. J. (1988). Parental perceptions of child-rearing practices in physically abusive and nonabusive families. *Developmental Psychology, 24*, 270-276.
- Urquiza, A. J., & McNeil, C. B. (1996). Parent-Child Interaction Therapy: An intensive dyadic intervention for physically abusive families. *Child Maltreatment, 1*, 132-141.
- Webster-Stratton, C. (1984). Randomized trial of two parent-training programs for families with conduct-disordered children. *Journal of Consulting and Clinical Psychology, 52*, 334-339.
- Webster-Stratton, C. (1985). Mother perceptions and mother-child interactions: Comparison of a clinic-referred and a nonclinic group. *Journal of Clinical Child Psychology, 14*, 334-339.
- Webster-Stratton, C. (1994). Advancing videotape parent training: A comparison study. *Journal of Consulting and Clinical Psychology, 62*, 229-315.
- Whipple, E. E., & Webster-Stratton, C. (1991). The role of parental stress in physically abusive families. *Child Abuse and Neglect, 15*, 279-291.
- Whiteman, M., Fanshel, D., & Grundy, J. F. (1987). Cognitive-behavioral interventions aimed at anger of parents at risk of child abuse. *Social Work, 32*, 469-474.
- Wolfe, D. A. (1987). Child-abusive parents: An empirical review and analysis. *Psychological Bulletin, 97*, 462-482.
- Wolfe, D. A., & Mosk, M. D. (1983). Behavioral comparisons of children from abusive and distressed families. *Journal of Consulting and Clinical Psychology, 49*, 633-640.
- Wolfe, D. A., Sandler, J., & Kaufman, K. (1981). A competency-based parent training program for child abusers. *Journal of Consulting and Clinical Psychology, 49*, 633-640.
- Wolfe, D. A., St. Lawrence, J. S., Graves, K., Brehony, K., Bradlyn, D., Kelly, J. A. (1982). Intensive behavioral parent training for a child-abusive mother. *Behavior Therapy, 13*, 438-451.

Joaquin Borrego, Jr., is a graduate student in the doctorate program in clinical psychology at the University of Nevada, Reno. His research focus is on physically abusive parent-child relationships and ethnic minority issues in clinical psychology. He is especially

interested in examining the influence of culture on different parenting practices and potential physically abusive behaviors among ethnic minority groups. He is also interested in the generalizability and applicability of empirical treatments with Spanish-speaking populations. He is currently conducting clinical and research work at the University of California Davis Medical Center's Child Protection Center.

Anthony J. Urquiza, Ph.D., is a child clinical psychologist and a clinical assistant professor at the Child Protection Center, Department of Pediatrics, University of California Davis Medical Center. Dr. Urquiza has extensive clinical experience with children, adolescents, and adults in a variety of inpatient and outpatient settings. His clinical and research interests and his publications center on all types of family violence, with a specific focus on family violence and ethnic minorities, the sexual victimization of males, the treatment of children and adult survivors of childhood sexual abuse, the development of children's sexuality, and mental health psychodiagnostic issues as they apply to child maltreatment. Dr. Urquiza is the author of a treatment manual for sexually abused children, and he is a member of the advisory board of the American Professional Society on the Abuse of Children.

Rebecca A. Rasmussen is a graduate student at the California School of Professional Psychology. Ms. Rasmussen completed her predoctoral internship at the Child Protection Center, Department of Pediatrics, University of California Davis Medical Center, where she worked in a clinical setting with physically and sexually abused children and/or their parents. She is in the process of completing her doctoral dissertation.

Nancy Zebell, Ph.D., is a psychologist at the Child Protection Center, Department of Pediatrics, University of California Davis Medical Center. Dr. Zebell has extensive social work and clinical experience with families (birth parents and foster or adoptive parents) and children in the area of child maltreatment. Her clinical and research interests include the treatment of child abuse; the assessment and treatment of parent-child relationships in abusive and high-risk situations; the treatment of families involved with the child protective service system; the development and implementation of child welfare service policy issues; and the development of collaborative, multidisciplinary, and family systems approach to child maltreatment.