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What is This?

In this study, we investigate the possibility that parents' questions lead to coercive interaction patterns in abusive versus nonabusive mother-child dyads. The interaction patterns of 15 abusive and 15 nonabusive mother-child dyads were examined as they performed structured play tasks in a clinic setting. We used sequential analyses to examine how children responded to their parents' questions compared to neutral comments and how parents responded to their children's answers versus their failure to answer. Abusive and nonabusive parents asked similar numbers of questions, and abused and nonabused children had similarly high response rates to those questions. However, results showed that when children did not answer questions, abusive parents were more likely to give commands and less likely to make neutral comments than nonabusive parents. Clinical implications for working with physically abusive parent-child relationships are also discussed.

Antecedents of Coercive Interactions in Physically Abusive Mother-Child Dyads

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Developmental psychopathological research has examined the links between child abuse and maladaptive outcomes by attempting to identify mediating social and emotional processes in the child (for a review, see Cicchetti & Toth, 1995). Clinical research, on the other hand, has attempted to explain how certain parenting behaviors support and increase the likelihood that the parent will use physical force (for a review, see Cerezo, 1997). Both approaches advance our understanding of the dynamics of abuse in the family and the consequences of abuse for children. In this article, we borrow ideas from both bodies of research, in an attempt to describe the context of

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coercive interactions in abusive and nonabusive parent-child dyads. More specifically, we focus on identifying the types of verbalizations that increase the likelihood of more coercive exchanges that typify abusive parent-child dyadic interactions.

Research in developmental psychopathology has investigated abused children's increased social and behavior problems by examining early attachment relationships (e.g., Carlson, Cicchetti, Barnett, & Braunwald, 1989; Cicchetti & Toth, 1995), emotion regulation (e.g., Hennessy, Rabideau, Cicchetti, & Cummings, 1994), and social information processing (e.g., Crick & Dodge, 1994). Findings from studies of attachment suggest that maltreated children are at higher risk for developing insecure attachments with caregivers, such as those characterized by an incoherent strategy for regaining emotional security. In other words, sometimes the child seeks comfort from parents, and at other times, the child reacts anxiously or even angrily when perceiving threats. Hennessy et al. (1994) found that physically abused boys were less able to regulate negative affect (i.e., fear) in response to interadult anger. Research findings have also suggested that abused children often fail to recognize positive social cues but are highly vigilant to hostile cues (Crittenden & Ainsworth, 1989; Slaby & Guerra, 1989). More specifically, Crick and Dodge (1994) found that physically abused children's higher risk of conduct problems was partly explained by the way they interpreted social cues. Abused children showed a greater tendency than nonabused children to interpret other children's behavior as threatening and hostile, seeming hypervigilant to signs of aggression and coercion. Although Crick and Dodge assumed that this hypervigilance was part of an overlearned system of behaviors suitable for responding to an abusive parent, these behaviors may also have been part of a broader dysfunction in attachment or emotional regulation systems.

Fundamental to much clinical research on abusive parent-child interactions are social-interactional models that assume the influence of both the parent's and child's behaviors on outcomes. In this article, we focus on the coercion model (Patterson, 1982). According to this model, parents do not use reasoning to manage their children's behavior but tend to discipline or correct their children by yelling, threatening, and whining. Children, in turn, tend to be physically and verbally aggressive. Beginning with a command to correct a child's behavior, the parent's continued and unsuccessful attempts to control and coerce the child typically escalate into highly aversive interplays of anger and defiance.

Research shows that the coercion model also describes interactions between physically abusive parents and their children (see Urquiza & McNeil, 1996, for a review). Urquiza and McNeil (1996) noted that the pri-

mary difference between abusive parents and the nonabusive parents that Patterson (1982) described is abusive parents' willingness to use physical force (e.g., hitting) as a means of getting a child to comply with a command. They theorize that children are likely to comply when parents use physical force, thus negatively reinforcing parents' coercive behaviors. In addition, the children may learn that if they escalate their defiance and negative affect, they can provoke their parents to the point where they become more concerned with stopping their children's aversive behaviors than they are with forcing the children to comply and withdraw. In this way, parents' inability to influence their children's behavior negatively reinforces the children's use of negative behavior.

Echoing Patterson's (1982) observations of coercive interactions, Urquiza and McNeil (1996) noted that the escalation from coercive to abusive parent-child interactions largely occurs within the context of discipline and often begin with a parental command–child noncompliance sequence. However, based on Crick and Dodge's (1994) belief that abused children are hypervigilant to perceived threat, we speculate that coercion and the avoidance of coercion are dominant themes of abusive parent-child interactions and are not limited to command-compliance sequences. Abusive parents may only thinly hide needs for coercion and control and are likely to be highly vigilant to their children's efforts to avoid being controlled. However, these speculations have yet to be proven.

Empirical research provides a description of command-compliance sequences in nonclinical populations, showing that parents who do not provide an opportunity for their children to "choose" to comply, but who emphasize obedience, are more likely to have to resort to coercive strategies to obtain compliance (Crockenberg & Littman, 1990). Kochanska and Aksan (1995) described parents who appeared to deliberately de-emphasize power and control when trying to gain their children's compliance by using reasoning, polite requests, suggestions, and distractions. These findings suggest that verbalizations that emphasize power and control are perceived as coercive and likely to elicit opposition from nonabused children. Parent verbalizations emphasizing power are those requiring the child to submit to the parent's will. Commands easily qualify as potentially coercive verbalizations, but questions may also serve a coercive function.

In a discussion of the parent-child relationship enhancement segment of parent-child interaction therapy (PCIT), Hembree-Kigin and McNeil (1995) described parent questions as taking the lead in play away from the child, which is contrary to the goal of reducing unnecessary parental control, thereby enabling the parent to become a more effective agent of social reinforcement. Questions, they noted, are often disguises for indirect commands

(e.g., "Don't you think it's time to put the toys away now?"). They also observed that questions sometimes imply disapproval of the child's choices or behaviors (e.g., "Wouldn't you rather make that sun yellow instead of brown?"). They recognized that, for the parent, asking a question can provide an entrance into a reciprocal conversational exchange. But they stated that excessive questioning often results in the child conversing with the parent less rather than more. However, we argue that whether the function of the question is coercive, questions give the child an opportunity to ignore or otherwise resist parental influence. If children take advantage of the opportunity to resist their parents' influence, we speculate that abusive parents, attentive to threats to their control, will be more likely to take steps to reestablish their authority. In this way, questions, like commands, may provide opportunities for abusive parents to escalate from noncoercive to coercive and potentially abusive interactions.

In sum, research leads us to the premise that abusive parent-child interactions are dominated by power and control. Using three parent-child interaction analogs, we will examine sequences of interaction between abusive and nonabusive parents and their behavior problem children. We ask three research questions. First, we ask whether abusive and nonabusive mothers differ in the number and types of questions they ask. Second, we ask whether abused and nonabused children differ in the way they respond to their parents' questions. Finally, we ask whether abusive and nonabusive parents differ in the way they react to their children's minimal or lack of response. Theory leads us to hypothesize that insofar as abusive parents are more coercive than nonabusive parents, abusive parents will react more coercively to their children's minimal or nonresponses to questions than nonabusive parents.

METHOD

Sample Selection

Participants in this study were 30 mother-child dyads selected from a larger group of 147 mother-child dyads participating in PCIT. All children were referred for treatment because of the caregiver's inability to manage the child's difficult behavior. Behavioral problems were primarily externalized: aggressive, violent interactions with peers and/or adults, tantrums, defiance, and oppositionality. Abused children were generally referred by their child protective services social worker, and nonabused children were self-referred or referred by pediatricians or schools. Before receiving treatment, parents and their children came into the clinic for an intake interview. During this

time, they completed a battery of measures of child behavior problems, parenting stress, and psychological well-being. We used scores on these measures to help determine an appropriate sample.

Out of 81 dyads in which the child had a documented history of physical abuse, we identified a group of 58 children who had been physical abused by their mothers (72%). Out of 66 children in treatment with their mothers and with no history of physical abuse, we identified 52 whose mothers had a low potential for abuse (scores below the clinical cutoff score of 166 on the Child Abuse Potential Inventory) (Milner, 1986), because previous research suggests that parents with high abuse potential scores have similar characteristics to those of abusive parents (Milner & Chilamkurti, 1991).

From each group of children, 15 dyads were randomly selected. This selection resulted in an abuse group consisting of 10 boys and 5 girls and a nonabuse group of 9 boys and 6 girls. The two groups of children did not differ from the larger pool of abused and nonabused children in age, sex, or level of behavior problems as reflected by scores on the Child Behavior Checklist (Achenbach, 1991) and the Eyberg Child Behavior Inventory (Eyberg & Ross, 1978). In this data set, as in large-scale data sets (e.g., U.S. Department of Health and Human Services, 2001), the likelihood of abuse does not vary by sex. However, like other researchers (e.g., Leslie et al., 2000), we found that more boys than girls were referred for treatment.

Table 1 shows selected characteristics of the abusive and nonabusive dyads. Findings indicated that the two groups of children differed only in the level of internalizing behavior problems reported by the caregiver. A greater proportion of abused children than nonabused children was likely to be reported as having clinically significant levels of internalizing behavior problems. An examination of mothers' scores on the Parent Stress Index (Abidin, 1995) reveals that compared to nonabusive mothers, abusive mothers were likely to report more stress from the parent role. We further explored the sources of these mothers' stress by performing analyses of variance on the six subscales of stress from the parent role on the Parent Stress Index and found that abusive mothers reported significantly lower competence in the parent role and significantly more depressive symptoms.

Observational Measures

We used the Dyadic Parent-Child Interaction Coding System-II (DPICS-II) to code parent and child verbalizations and behaviors. DPICS-II is a microanalytic behavioral coding system (Eyberg, Bessmer, Newcomb, Edwards, & Robinson, 1994), developed to code children's behaviors as well as parenting skills associated with PCIT. DPICS-II has a total of 52 different

TABLE 1:   Sample Characteristics by History of Abusiveness

	Abuse Group	*Nonabuse Group*
Sex of child (% male)	67	60
Age of child (mean)	4.5	3.9
CBCL *T* scores (mean)		
Internalizing	64.9	55.8*
Externalizing	66.6	65.0
Total	67.7	62.9
ECBI raw scores (mean)		
Intensity	158.1	148.3
Problem	22.9	18.5
Mother's marital status (%)		
Married	20	36
Divorced/Separated	30	36
Single	50	29
Age of mother (mean)	30.1	29.8
Parent Stress Index (mean raw scores)		
Child as source of stress	136.5	129.6
Parent role as source of stress	148.5	129.7**
Competence subscale	34.0	29.8*
Depression subscale	25.9	20.9**

NOTE: CBCL = Child Behavior Checklist (Achenbach, 1991); ECBI = Eyberg Child Behavior Inventory (Eyberg & Ross, 1978).
*$p < .05$. **$p < .01$.

codes, distinguishing among different kinds of verbalizations (e.g., descriptions, questions, commands), vocalizations (e.g., yell, whine, laugh), and behaviors (e.g., compliance, answering, physical positives). In this study, we focused on interaction sequences begun by parents' questions and neutral comments, combining several smaller codes to make these larger categories of response.

Questions. In DPICS-II, questions are defined as verbal inquiries, distinguished from declarative statements by having a rising inflection at the end or by having the structure of a question. Questions that suggested that a behavior should be performed by the other person (i.e., commands in the form of a question) were coded as commands.

Answers and nonanswers. If the child responded to a question by providing the information required within 5 seconds of the question being asked, an answer was coded. If a child failed to answer a question within 5 seconds or made a comment that did not provide the information requested, a nonanswer

was coded. If the parent interrupted the 5-second postquestion window with another verbalization (e.g., another question, an unrelated command), neither answer nor nonanswer to the first (interrupted) question was coded. Instead, coders noted that the child had no opportunity to answer.

Neutral comments. Neutral comments were nonevaluative comments that did not demand any sort of response from the other person. To form this category, we combined DPICS-II categories of behavioral and information descriptions (i.e., nonevaluative, declarative sentences that describe people, objects, or activities), reflective statements (i.e., statements that repeat or rephrase the immediately preceding verbalization by the other member of the dyad), and acknowledgments (i.e., brief responses that indicate attention to what the other is saying but do not describe or evaluate).

Commands. Commands were directions from one person to another that included a stated or implicit *you* as the subject and a verb phrase indicating that a vocal or motoric behavior should be performed.

Negative behaviors. Negative behaviors were any aversive verbalizations, vocalizations, or behaviors. This category combines the following DPICS-II categories: criticisms (any negative evaluation of the products, attributes, or behavior of the other), negative vocal qualities of verbalizations such as yelling or whining, destructive behavior, and physical negatives (any touch intending to hurt or restrain).

Positive behaviors. Positive behaviors combined praises (any positive evaluation of products, attributes, or behavior of the other), laughing (in the context of shared mutual positive affect), and physical positives (any touch that occurs in the context of positive or neutral interaction that does not intend to hurt or restrain).

Procedures

On the first session of PCIT, before beginning any instruction on the nature of the treatment program, we asked parents and children to play together according to specific rules set forth by the therapist. The parent-child dyad played alone together at a table with toys provided by the clinic in a therapy room with a two-way mirror. Dyads were observed in three distinct 5-minute parent-child interaction analogs varying in the amount of parental control required. The first situation (child-directed interaction) required the

parent to follow the child's lead in directing play. Parents were told to let the child pick an activity and to play along. In the second situation (parent-directed interaction), parents were instructed to pick an activity and have the child play with the parent according to the parent's rules. The third and final situation consisted of the parent directing the child to clean up without the parent's assistance.

The parent-child interactions were videotaped using a corner-mounted camera in plain view of participants. Each videotape was transcribed, and parents' and children's behaviors were coded according to the DPICS-II coding system.

Behavioral coding. All DPICS-II coders were undergraduate or graduate students in psychology. Each coder was given didactic training in DPICS-II codes and procedures. Acceptable coders were individuals who were familiar with DPICS-II, coded a minimum of 10 five-minute segments, and reached at least 85% reliability with a criterion tape using the DPICS-II codes (i.e., mean reliability for the last two coding tapes). Observer drift was assessed by requiring coders to re-code a criterion videotape after coding 50% of the tapes. Any coder who had less than 85% reliability on the criterion videotape was retrained until he or she reached 85% reliability. For reliability purposes, 20% of all videotapes were re-coded by a reliability checker. To minimize bias, coders were blind to group assignment. Inter-observer agreement was computed using kappa. Kappas for the various parent and child codes are presented in Table 2. According to Fleiss's (1981) criterion levels, kappas falling between 0.40 and 0.60 are considered fair, those between 0.60 and 0.70 are good, and those above 0.70 are considered excellent. With the exception of children's positive behaviors, which rated only fair-good reliability, codes fell into the good-excellent range, suggesting that observers were reliable in coding parent and child behaviors.

Analysis Strategy

Although behavioral observation research offers rich and detailed information on abusive parent-child interactions, previous research has largely examined parent and child behaviors, reporting frequencies and rates (e.g., Burgess & Conger, 1978). We performed sequential analysis in this study (Bakeman & Quera, 1995). This methodology examines the contingent probability of a specific behavior being followed by another behavior. For example, we can determine the likelihood that children will respond positively versus negatively to parents' questions compared to their commands or neutral

TABLE 2:   Frequencies and Rates of Parent-Child Behaviors

	Kappa	Abuse		Nonabuse		F
		M	SD	M	SD	
Parent behaviors						
Verbal praises	0.84	4.5	4.0	11.9	9.6	7.6**
Positive behaviors	0.66	7.0	5.2	16.0	11.0	8.8**
Negative behaviors	0.73	10.3	15.2	6.1	5.9	1.0
Descriptions	0.75	50.1	15.8	71.1	18.4	11.3**
Neutral comments	0.77	126.9	37.1	152.6	41.4	3.2†
Commands	0.81	64.3	27.6	71.6	38.2	0.2
Questions	0.87	39.4	14.1	38.1	16.2	0.4
Total verbalizations		213.7	56.8	250.1	62.8	2.8
Child behaviors						
Verbal praises	0.92	0.5	0.9	1.3	1.8	2.3
Positive behaviors	0.57	1.3	1.8	2.9	2.9	3.2†
Negative behaviors	0.64	7.7	11.5	11.1	9.6	0.8
Descriptions	0.79	60.2	22.6	66.0	34.1	0.3
Neutral comments	0.83	102.8	28.0	114.0	49.2	0.6
Answer/No answer	0.71	35.1	13.9	32.4	13.6	0.1
Total verbalizations	—	125.1	38.8	135.8	54.6	0.4

†$p < .10$. **$p < .01$.

comments. To test whether specified sequences of behavior varied significantly between the abuse and nonabuse groups, hierarchical loglinear analyses were performed (ILOG) (Bakeman & Robinson, 1994).

RESULTS

Table 2 lists the average frequencies of parent and child verbalizations and behaviors and the results of analyses of variance testing for differences between abusive and nonabusive parents and children. For the most part, abused and nonabused children's behavior and verbalizations did not significantly differ. However, Table 2 shows that abusive parents praised their children significantly less often and made fewer neutral comments than nonabusive parents. However, the two groups of parents did not differ significantly in the numbers of questions they asked, nor did children differ in the number of answers they gave or in their ratios of nonanswers to answers. Abused children answered 6 questions for every 1 they did not answer (88% response rate), and nonabused children answered 14 questions for every 1 they did not answer (93% response rate). Sequential analyses showed that

abused and nonabused children's speed of response to questions was also similar: 57% of abused children's answers and 62% of nonabused children's answers were given in the 1st second after the parent asked a question. Between 95% and 96% of abused and nonabused children's answers were given within 3 seconds of the question being asked. These findings show that in answer to our first research question, abusive and nonabusive parents do not differ in the numbers or types of questions they asked. In answer to our second research question, we found that abused and nonabused children in our sample did not significantly differ in the proportion of questions they answered or in the speed with which they answered them.

Children's Responses to Their Parents' Questions

On the whole, parents' questions generated a considerable number of child verbalizations in both groups of dyads. In fact, parents' questions generated at least as much verbal interaction as parents' neutral comments. Approximately 32% to 35% of all of abused and nonabused children's neutral comments were made in the 10 seconds following parents' questions (not including their answers). In comparison, 27% to 28% of the children's neutral comments were made within 10 seconds of parents' neutral comments. Parental questions often were followed by parent verbalizations: 43% of all of abusive parents' neutral comments and 48% of nonabusive parents' neutral comments were made within 10 seconds of their own questions being asked. Both abused and nonabused children were 3.5 times more likely to make neutral comments after their parents' questions than they were after their own questions. Interestingly, abusive and nonabusive parents also were more likely to make neutral comments after their own questions than they were after their children's questions. To sum up, these findings suggest that both abused and nonabused children interpreted their parents' questions as opportunities to engage in conversation, and parents used their children's responsiveness as an opportunity to maintain verbal contact.

We next examined the nature of abused and nonabused children's responses to their parents' questions. First, we calculated the conditional probability of abused and nonabused children giving a one- or two-word response (i.e., acknowledgment) versus more information (i.e., a description) within 5 seconds of the parent asking a question versus making a neutral comment. Table 3 shows the frequencies of abused and nonabused children's acknowledgments and descriptions occurring within 5 seconds of their parents' neutral comments and questions. The results of ILOG analyses revealed a significant difference between patterns of abusive and nonabusive dyads interactions, Difference $G^2(1, N = 30) = 6.0$, $p < .05$. However, closer exami-

TABLE 3:   Frequencies and Odds Ratios of Children's Response of Description Versus Acknowledgment Within 5 Seconds of Their Parents' Question Versus Description

	Parent Question		Parent Description	
Child's Response	Description	Acknowledgment	Description	Acknowledgment
Abuse group	362	243	152	76
Cellwise odds	1.14	0.88	0.65	1.54
Nonabuse group	352	270	200	65
Cellwise odds	0.88	1.14	1.54	0.65

NOTE: Cellwise odds ratios were calculated within categories of child behavior (e.g., answer, nonresponse) and across abuse versus nonabuse groups. Difference in significance of saturated model compared to model with three bivariate terms: $G^2 = 5.9$, $df = 1$, $p < .05$.

nation of these results showed that abused children were more likely to give minimal responses to their parents' neutral comments than were nonabused children. The two groups did not differ in their responses to questions.

We next compared the likelihood that yes or no questions versus questions requiring an answer with information would be followed (within 5 seconds) by a description versus an acknowledgment. The results of this analysis showed that direct questions (i.e., those requiring a yes or no response) were likely to be followed by an answer and additional information or descriptions approximately 35% to 40% of the time in both abusive and nonabusive dyads. In comparison, about 85% of abused and nonabused children's responses to questions requiring information contained descriptive information. In short, abusive and nonabusive parents' information-seeking questions were more likely than direct questions to elicit descriptive information. Furthermore, abused and nonabused children gave extra information to their parents' questions at about the same rate.

Parents' Reactions to Their Children's Responsiveness

To determine how parents reacted to their children's minimal and non-responses, we performed two separate analyses. First, we compared the likelihood that abusive parents versus nonabusive parents would respond positively, negatively, or neutrally to their child's acknowledgments (one- to two-word responses) versus their descriptions. According to the results of this analysis (see Table 4), abusive parents are seven times more likely than nonabusive parents to respond negatively to their children's acknowledgments, and nonabusive parents are twice as likely as abusive parents to respond neutrally.

TABLE 4: Frequencies and Odds Ratios of Parents' Negative, Positive, or Neutral Response Within 5 Seconds of Their Children's Acknowledgment Versus Description

	Child Acknowledgment			Child Description		
Parent's Response	Negative	Positive	Neutral	Negative	Positive	Neutral
Abuse group	22	24	212	59	26	386
Cellwise odds	7.40	1.12	0.49	1.85	0.51	0.95
Nonabuse group	4	27	291	39	56	452
Cellwise odds	0.13	0.89	2.03	0.54	1.95	1.05

NOTE: Cellwise odds ratios were calculated within categories of child behavior (e.g., answer, nonresponse) and across abuse versus nonabuse groups.

Next, we looked at abusive and nonabusive parents' responses to their children's nonanswers by comparing the likelihood that parents would respond negatively versus neutrally to their children's nonanswers versus answers. As Table 4 illustrates, results showed that abusive and nonabusive parents were both much more likely to respond neutrally than negatively whether or not their children answered and that the proportions of neutral to negative responses did not differ across the type of response.

To determine how abusive and nonabusive parents responded to their children when they did not answer their questions, we compared the likelihood that parents would issue a command after their children's nonanswers (vs. answers) with the likelihood that they would ask another question or make a neutral comment. The results of sequential and ILOG analyses (see Table 5) showed that the two groups differed significantly in their patterns of responses to answers and nonanswers, Difference $G^2(1, N = 30) = 8.1, p < .05$. Abusive parents were nearly three times as likely as nonabusive parents to give a command within 5 seconds of their children's nonresponse, and nonabusive parents were nearly three times as likely as abusive parents to respond to their children's nonresponse with a neutral comment.

Table 5 also shows parents' responses (within 5 seconds) to their children's answers. It is interesting to note that in the 5 seconds after a child answers a question, both groups of parents are likely to control the conversation by asking more questions or giving commands.

Children's Responses to Parents' Questions Versus Commands

The above analyses show that children generally answered their parents' questions, and if their children did not answer, abusive parents were more

TABLE 5:   **Frequencies and Odds Ratios of Parents' Response of a Command or Question Versus Neutral Comment Within 5 Seconds of Their Children's Answer Versus Nonresponse to a Question**

Parent's Response	Child Does Not Answer			Child Answers		
	Question	*Command*	*Neutral*	*Question*	*Command*	*Neutral*
Abuse group	27	40	25	253	130	267
Cellwise odds	1.11	2.91	0.34	1.22	0.97	1.18
Nonabuse group	12	9	23	234	140	308
Cellwise odds	0.90	0.34	2.94	0.82	1.03	0.85

NOTE: Cellwise odds ratios were calculated within categories of child behavior (e.g., answer, nonresponse) and across abuse versus nonabuse groups.

likely than nonabusive parents to issue a command. But we do not know whether abused children reacted more negatively to their parents' commands or questions than nonabused children. To see how abused and nonabused children responded to their parents' questions or commands versus neutral verbalizations, we compared the likelihood that abused and nonabused children would respond negatively versus neutrally within 5 seconds of their parents' commands, questions, and neutral comments. In this analysis, we defined a child's negative response as one showing negative affect or behavior (e.g., whining, yelling, destructive behavior, smart talk), but we did not include in this category either noncompliance or nonanswers. Results of sequential and ILOG analyses (see Table 6) confirmed that abused children's responses differed significantly from nonabused children, Difference $G^2(2, N = 30) = 6.9, p < .05$. The odds ratios of children's responses to their parents' questions and commands show that both groups of children were likely to behave more negatively after commands than after questions or neutral comments and more likely to behave neutrally after questions than after other parent behaviors. However, abused children were twice as likely as nonabused children to behave negatively after a question.

DISCUSSION

We have attempted to extend existing research by investigating the contexts that allow coercive behavior to emerge outside of the command-compliance arena. Specifically, we looked to see whether there was evidence suggesting that children might interpret questions as coercive tools of the parent. We also examined parents' responses to their children's acknowledgments

TABLE 6:   **Frequencies and Odds Ratios of Children's Negative or Neutral Responses Within 5 Seconds of their Parents' Command or Question Versus Neutral Comment**

Child's Response	Parent Command		Parent Question		Parent Neutral	
	Negative	Neutral	Negative	Neutral	Negative	Neutral
Abuse group	122	307	32	511	31	242
Cellwise odds	4.75	0.21	0.22	4.45	0.68	1.47
Nonabuse group	129	368	15	487	43	240
Cellwise odds	4.39	0.23	0.11	9.18	1.06	0.94

NOTE: Cellwise odds ratios were calculated within categories of child behavior (e.g., answer, nonresponse) and across abuse versus nonabuse groups.

versus descriptions, and answers versus nonanswers, in the belief that abusive parents would respond more negatively to nonanswers and attempt to quickly regain control over their children.

We found no evidence to suggest that either abused or nonabused children considered questions coercive. Both groups of children were likely to answer questions and were likely to respond neutrally rather than negatively. Furthermore, both groups of children were likely to be quite forthcoming in their answers, giving more information than was required by the question. However, we did find that abused children were more likely to respond negatively to their parents' questions. This may be an indication that abused children were more likely to limit any attempt to draw the parent into an interaction or, more simply, that abused children were likely to notice that commands were likely to follow their nonresponses to questions. Furthermore, abused children were more reticent in response to parents' neutral comments. After a parent's neutral comment, abused children were much more likely than nonabused children to "acknowledge" the comment by giving brief non-evaluative responses such as "huh" or "oh." Although this information might not be evidence that abused children were attempting to withdraw or limit their interactions with their parents, it is interesting to note that abusive parents were significantly more likely than nonabusive parents to respond negatively to acknowledgments than to descriptions.

Findings showed that neither abusive nor nonabusive parents responded particularly negatively to children's nonanswers. In fact, they responded no more negatively to nonanswers than answers. However, our findings also showed that after their children's nonresponses, abusive parents were more likely to use commands, possibly to reassert their influence over their chil-

dren. As results indicated, both abused and nonabused children responded more negatively to commands than to questions or neutral comments.

On the whole, these data portrayed abusive parents and their children as vigilant to threats to their control and willing to use coercive tactics to regain control. However, their use of coercive tactics did not extend to all situations. When their control and influence was not threatened, the patterns of abusive parent-child interactions looked very similar to those of nonabusive parents and children.

Clinical Implications

Previous research has advocated the necessity of enhancing the abusive parent-child relationship by increasing positive interactions and decreasing negative behaviors (Milner & Chilamkurti, 1991; Urquiza & McNeil, 1996). Therapies such as PCIT, focusing on increasing parents' positive behavior, reducing their need to control play, and obtaining compliance from the child, largely accomplish these goals (Borrego & Urquiza, 1998). However, our data suggest that therapists should be alert to the way abusive parents interpret and respond to their children's nonresponsiveness (e.g., a simple acknowledgment to a parent's descriptive statement, one-word answers to questions).

In their book on PCIT, Hembree-Kigin and McNeil (1995) propose that to properly follow the child's lead in play, parents should avoid asking questions. Although questions can be a tool for controlling interactions, our data show that children responded to parents' direct and information-seeking questions and that these types of questions appeared to turn the lead over to the child, generating conversation. Questions did not appear to serve a particularly coercive function in parent-child interactions. These benign effects suggest that when therapists note that a parent's questions do not elicit responses from the child, the parent and child may have more serious problems than a deficit of parenting skill or not understanding how to properly engage their child in play (e.g., an impoverished parent-child relationship or an affective disorder).

Limitations and Future Directions

We realize that there are several limitations to this study. First, the sample is small and select. It consists entirely of abusive and nonabusive female caretakers and their children with serious behavior problems. We do not have information about whether these groups are representative of the populations of abused and nonabused children with behavior problems. Furthermore,

with only 15 dyads per group, we lacked the power to perform more stringent analyses of group differences. We relied on hierarchical loglinear analyses to reveal any hints of group differences. Although this procedure is adequate for an exploratory study of this nature, it is vulnerable to Type I errors. We look to future research to determine whether our findings are typical of these types of dyads. Second, we cannot extend our findings for abusive and nonabusive mothers and their children to abusive and nonabusive fathers and their children. Research in child development highlights the different roles fathers play in the lives of their children (e.g., Parke, 1996). It is therefore likely that interactions that set off coercive interaction cycles between fathers and their children are different from those we have documented for mothers.

We hope that future behavioral observation studies will continue to examine the contexts in which negative abusive parent-child interactions occur. By using sequential analysis, researchers may identify conditions that give rise to potentially abusive behaviors. The identification of negative sequences of interactions will hopefully contribute to a more precise understanding of the nature of abusive relationships and consequently to better designed treatments for abusive parents and their children.

REFERENCES

Abidin, R. R. (1995). *Parenting Stress Index* (3rd ed). Odessa, FL: Psychological Assessment Resources.

Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist: 4-18 and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.

Bakeman, R., & Quera, V. (1995). *Sequential analysis with SDIS and GSEQ*. Cambridge, UK: Cambridge University Press.

Bakeman, R., & Robinson, B. F. (1994). *Understanding log-linear analysis with ILOG: An interactive approach*. Hillsdale, NJ: Lawrence Erlbaum.

Borrego, J., & 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.

Burgess, R. L., & Conger, R. D. (1978). Family interaction in abusive, neglectful, and normal families. *Child Development*, *49*, 1163-1173.

Carlson, V., Cicchetti, D., Barnett, D., & Braunwald, K. (1989). Disorganized/disoriented attachment in maltreated infants. *Developmental Psychology*, *25*, 525-531.

Cerezo, M. A. (1997). Abusive family interaction: A review. *Aggression and Violent Behavior*, *2*, 215-240.

Cicchetti, D., & Toth, S. L. (1995). A developmental psychopathology perspective on child abuse and neglect. *Journal of the American Academy of Child & Adolescent Psychiatry*, *34*, 541-565.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin*, *115*, 74-101.

Crittenden, P. M., & Ainsworth, M. (1989). Child maltreatment and attachment theory. In D. Cicchetti & V. Carlson (Eds.), *Child maltreatment: Theory and research on the causes and consequences of child abuse and neglect* (pp. 432-463). New York: Cambridge University Press.

Crockenberg, S., & Littman, C. (1990). Autonomy as competence in two-year-old: Maternal correlates of child compliance, defiance, and self-assertion. *Developmental Psychology*, *26*, 961-971.

Eyberg, S. M., Bessmer, J. L., Newcomb, K., Edwards, D., & Robinson, E. A. (1994). *Dyadic Parent-Child Coding System-II (DPICS-II)*. Corte Madera, CA: Select.

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.

Fleiss, J. L. (1981). *Statistical methods for rates and proportions*. New York: Wiley.

Hembree-Kigin, T., & McNeil, C. (1995). *Parent-child interaction therapy*. New York: Plenum.

Hennessy, K. D., Rabideau, G. J., Cicchetti, D., & Cummings, E. M. (1994). Responses of physically abused and nonabused children to different forms of interadult anger. *Child Development*, *65*, 815-828.

Kochanska, G., & Aksan, N. (1995). Mother-child mutually positive affect, the quality of child compliance to requests and prohibitions, and maternal control as correlates of early internalization. *Child Development*, *66*, 236-254.

Leslie, L. K., Landsverk, J., Ezzet-Lofstrom, R., Tschann, J. M., Slymen, D. J., & Garland, A. F. (2000). Children in foster care: Factors influencing outpatient mental health service use. *Child Abuse and Neglect*, *24*, 465-476.

Milner, J. S. (1986). *The child abuse potential inventory manual* (2nd ed.). Webster, NC: Psytec.

Milner, J. S., & Chilamkurti, C. (1991). Physical child abuse perpetrator characteristics: A review of the literature. *Journal of Interpersonal Violence*, *6*, 345-366.

Parke, R. D. (1996). *Fatherhood*. Cambridge, UK: Cambridge University Press.

Patterson, G. R. (1982). *Coercive family process*. Eugene, OR: Castalia.

Slaby, R. G., & Guerra, N. G. (1989). Cognitive mediators of aggression in adolescent offenders: 1. Assessment. *Developmental Psychology*, *24*, 580-588.

Urquiza, A. J., & McNeil, C. (1996). Parent-child interaction therapy. An intensive dyadic intervention for physically abusive families. *Child Maltreatment*, *1*, 134-144.

U.S. Department of Health and Human Services. (2001). *Child maltreatment, 1999*. Washington, DC: U.S. Government Printing Office.

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