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Parents' Attributions for Achieving Compliance from Attention-Deficit-Disordered Children

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Ninety-one parents provided reasons for the compliance and noncompliance of either their attention-deficit-disordered, hyperactive (ADDH) or non-ADDH child in six different situations. These attributions were rated on Weiner's (1979) dimensions of locus, stability, and controllability. While parents used the same categories to explain the reasons for their children's complaince behavior, they used different dimensional ratings for these explanations. Mothers rated attributions for noncompliance as more external than did fathers. Mothers of ADDH children viewed the causes of their children's behavior to be more unstable than did mothers of control children. Also, ADDH parents had lower expectations of achieving future compliance from their child than did non-ADDH parents. Results were discussed in terms of parental experiences, the need to consider an idiosyncratic approach to attributional meaning, and treatment implications.

Of all the presenting problems found in child-clinical treatment settings, noncompliance to parental directives is the most frequently observed (Johnson, Wahl, Martin, & Johansson, 1973). This issue is of special concern for parents of attention-deficit-disordered, hyperactive (ADDH) children (Barkley, 1981). These parents struggle daily with the problem of getting their children to adhere to family rules of conduct. Failure to comply to repeated direc-

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tives quite often results in an escalation of negative reactions and, eventually, the cessation of attempts at enforcement. Barkley and Cunningham (1979) note that for many parents of ADDH children, repeated failure to achieve compliance leads to withdrawal from the child in an attempt to avoid further failure experiences.

Studies of parent–child interaction have documented the difficulties experienced by parents of ADDH children. Campbell (1975) found that mothers of ADDH children made an extra effort to control the behavior of their children, providing encouragement and impulse control suggestions. However, these mothers were also more disapproving and commanding than were mothers of non-ADDH children. Cunningham and Barkley (1979) observed that mothers of ADDH children paid less attention to compliant behavior, independent play, or positive social interactions. They concluded that although these mothers did not cause their children's difficulties, the mother's style of interacting may have contributed to the maintenance of the child's behavior. A study by Tallmadge and Barkley (1983) extended these findings by comparing the interactions that ADDH and non-ADDH children had with each parent. When mothers made a request, ADDH children responded with more negativeness and competitiveness than did non-ADDH controls. However, when fathers made a similar request, ADDH and normal children did not differ in their reactions. Finally, strained interactions between members of ADDH families have been found to be associated with parents' increased sense of stress around the parenting role (Ross & Ross, 1982) and decreased sense of self-esteem (Mash & Johnston, 1983).

While these negative experiences, both behavioral and affective, would be expected to have bidirectional effects upon the explanations that ADDH parents offer and the behavior that their children display, previous research has dealt only with parental attributions for their children's behavior. Attributions have been obtained for the presenting problem in a treatment setting (Compas, Adelman, Freundl, Nelson, & Taylor, 1982), learning disability (Pearl & Bryan, 1982), general academic level (Cashmore & Goodnow, 1986), mathematical performance (Holloway & Hess, 1985), and prosocial peer-related behavior (Dix & Grusec, 1985). None of these studies, however, has directly assessed attributions for the outcome of a parental attempt to bring about change in the child's behavior. Clearly, for a more complete understanding of the nature of parent–child interaction, it is important to know the beliefs that parents bring to this encounter.

The purpose of this study was to determine the attributions used by ADDH parents in situations where they have attempted to achieve compliance from their children. It was expected that the strained interactions between these parents and their children would result in the production of unique attributional patterns.

Weiner (1979, 1985) has suggested that in achievement situations, one typically seeks out explanations for outcomes. These explanations or attributions are for the most part reflective of the achievement history of the individual and, when placed along the dimensions of locus (location of the cause), stability (constancy of the cause over time), and controllability (personal ability to change the cause), they provide psychological linkages to affective and evaluative variables. Given the greater salience of ADDH children's noncompliance, their parents were expected to rate the causes of noncompliance as more external to themselves, more stable, and less controllable than would the parents of non-ADDH children. Likewise, taking less credit for compliance, ADDH parents were expected to rate these causes as less internal to themselves, less stable, and less controllable than would the non-ADDH parents. Finally, given the fact that mothers of ADDH children experience more difficulties with their children than do ADDH fathers and control parents (Mash and Johnston, 1983), it was predicted that they would be least likely to expect future compliance.

METHOD

Subjects

Parents were recruited into the study from several sources. For those with a child who had received a diagnosis of ADDH, the referral sources were an outpatient clinic at a major teaching hospital, a children's mental health assessment and treatment center, and a university-based training program for ADDH children. Participation in the study occurred between initial diagnosis and the time an intervention was offered. Parents were assured that future remediation was not dependent upon participation. Parents with a non-ADDH-diagnosed child were contacted through various community agencies, a university preschool program, and nominations provided by the parents of ADDH children. They were asked to participate in a study of children's compliance. Although both parents in each family were invited to participate in the study, in many cases only one of the parents did so. An examination of the responses of same-sex parent with and without spouse participating in the study revealed no significant differences for any of the variables under consideration in the study.

To further differentiate the ADDH and non-ADDH groups, parents were asked to indicate whether their child displayed the following criteria provided by Barkley (1981): poor self-control, noncompliance, and problems with restlessness and impulsivity; these problems must have been evident be-

fore the child was 5 years of age, and the disorder must have been a problem for at least a year. In addition, the parents rated their child on the Conners Parent's Questionnaire (Goyette, Conners, & Ulrich, 1978) and Barkley's (1981) Home Situation Questionnaire.

Thirty-one of the 36 mothers and 20 of the 35 fathers of children who had received a clinic-based diagnosis of ADDH indicated that their child displayed all of Barkley's (1981) clinical criteria, rated their child on the Conners Parent's Questionnaire as being at least 2 standard deviations above the mean (Mothers' $M = 21.7$, $SD = 3.5$; Fathers' $M = 18.8$, $SD = 3.0$), and indicated difficulties in at least half of the situations in Barkley's (1981) Home Situation Questionnaire (Mothers' $M = 11.4$, $SD = 2.0$; Fathers' $M = 11.2$, $SD = 2.5$).

For the non-ADDH parents, 20 of 25 mothers and 20 of 24 fathers indicated that their children displayed none of Barkley's criteria, rated the children as being less than 1 standard deviation above the mean on the Conners Parent's Questionnaire (Mothers' $M = 4.7$, $SD = 2.6$; Fathers' $M = 6.7$, $SD = 3.0$), and indicated that problems on the Barkley (1981) Home Questionnaire were evident in less than half of the situations (Mothers' $M = 3.3$, $SD = 2.2$; Fathers' $M = 4.26$, $SD = 2.3$). Scores on these latter two measures were significantly lower than the ratings generated by the parents of the ADDH children, $F(1, 87) = 486.34$, $p < .001$ and $F(1, 87) = 240.03$, $p < .001$, respectively. Also, while mothers and fathers of non-ADDH children did not differ in their Conners Parent's Questionnaire scores, mothers of ADDH children rated their children as displaying more difficulties than did the fathers, $F(1, 87) = 13.99$, $p < .01$. Finally, although mothers and fathers did not differ in their level of education, parents of non-ADDH children had a higher mean number of years of formal education ($M = 13.77$, $SD = 3.01$) than did parents of ADDH children ($M = 11.91$, $SD = 2.4$), $F(1, 87) = 9.12$, $p < .003$.

The ages of the two groups of targeted children did not differ. The mean and standard deviation for the ADDH children was 6.09 and 2.30, and for the non-ADDH children, 5.67 and 1.80, respectively.

Measures

Parental Attribution Questionnaire. The PAQ was designed to assess both the attributions and the dimensional meanings that parents offered for achieving and failing to achieve compliance from their children. It was a slightly modified version of reliable and valid questionnaires used by Anderson, Horowitz, and French (1983) and Russell (1982). Six situations, presented as parental requests for the child to play nicely with another child, to come in from playing outside, to clean his or her room, to get ready for

bed, to behave during mealtime, and to stop interrupting while the parent was speaking on the telephone, were presented with a positive and a negative outcome in a randomly determined order. For example, one situation read: "You ask your child to play nicely with another child and your child does what you want. The main reason for this is: _____." The parent was then asked to rate the reason on 10-point scales designed to assess the dimensions of locus, stability, and controllability. The end points for *locus* were "entirely due to you" (internal) and "not due to you at all" (external). Note that this dimension taps locus from the parent's and not the child's perspective. For *stability* the end points were "always changes" (unstable) and "never changes" (stable). Finally, *controllability* was measured on a scale defined by the end points "totally under your control" (controllable) and "not under your control at all" (uncontrollable).

Expected Outcome Questionnaire. The ESQ tapped parents' expectations for achieving compliance from their children in the six situations targeted in the PAQ. For example, one item read: "Suppose you ask your child to clean up his/her room. Will your child do it?" The degree of expected compliance was rated on a 10-point scale from "almost sure to do it" to "almost sure *not* to do it."

Procedure

Parents completed the questionnaire package in their homes. A research assistant was present to answer any questions and to emphasize that the parent was to rate the cause and not the outcome of the scenario. The order of presentation of questionnaires was as follows: PAQ, EOQ, HSQ, and CPQ. The length of time to complete the questionnaires ranged from 30 minutes to 2 hours.

RESULTS

Categorical Analysis

The Elig and Frieze (1975) Coding Scheme of Perceived Causality and the Sobol, Earn, Bennett, and Humphries (1983) attributional categories provided the basis for the development of eight categories for coding parents' attributions. However, since the frequencies for some categories were quite small, they were combined to form three broad categories: explanations attributed to the child (child's mood, child's knowledge of family rules, child's motivation, other characteristics of the child), explanations attributed to the parents (parental assistance, parental characteristics and style), and

child's personality compatibility with another. Interrater reliability was obtained on 24 of the 91 questionnaires, with 94.5%, 85.0%, and 83.1% agreement between two judges for the three categories, respectively. One judge scored the remaining questionnaires.

Chi-square analyses were performed for each of the outcome × situation scenarios. In order to determine differential category usage, they were of a 2(mothers/fathers) × 2(ADDH/non-ADDH) form. Of the 12 chi squares, only the noncompliant Play scenario was found to be significant, $\chi^2(3, N = 90) = 11.777, p < .01$. Mothers and fathers of ADDH children used characteristics of the child (72.4% and 75%) more than personality compatibility (27.6% and 25%) to explain a failure to comply in a play situation. On the other hand, parents of controls chose the opposite pattern; 40% of the mothers and 35% of the fathers of controls used characteristics of the child, while 60% of mothers and 65% of fathers used personality compatibility.

Across the six situations, 69.1% of the parents used characteristics of the child and 25.5% used characteristics of the parents, while 5.6% used personality interaction to explain compliance. This latter set of attributions all came from the play situation. For the six noncompliant situations, 88.9% of the attributions were composed of child characteristics, 3.3% were parent characteristics, and 7.8% were personality interaction. Again, this latter category came almost exclusively from the play situation.

Dimensional Analyses

Separate analyses of variance were carried out for ratings of locus, stability, and controllability, respectively. All were of a 2(Families—ADDH/non-ADDH) × 2(Parent—Mother/Father) × 2(Compliance/Noncompliance) × 6(Situation) mixed design, with the first two factors being between-group variables. Scores on the dimensions could range from 1 to 10. Low scores were indicative of internal, stable, and controllable evaluations. Post hoc analyses were carried out using Newman-Keuls tests. Means and standard deviations are presented in Table I.

Locus. A main effect of compliance, $F(1, 87) = 187.54, p < .001$, was modified by a significant Parent × Compliance interaction, $F(1, 87) = 5.67, p < .02$. While mothers and fathers rated compliance in a similar manner, mothers rated noncompliance as being more external than did fathers.

A main effect for Situations, $F(5, 435) = 19.23, p < .001$, was modified by the Compliance × Situations interaction, $F(5, 435) = 5.57, p < .001$. Under the Noncompliance condition, the Play situation was significantly more external than the other five situations, all of which did not differ

Table I. Means and Standard Deviations of Parents' Ratings on the Locus, Stability, and Controllability Dimensions[a]

	Compliance						Noncompliance					
	Play	Bed	Room	Phone	Come	Meals	Play	Bed	Room	Phone	Come	Meals
Locus												
ADDH mothers	5.8	4.7	4.5	3.8	4.8	4.2	8.3	8.2	7.7	7.6	7.8	7.9
	(2.6)	(3.1)	(2.6)	(2.7)	(3.0)	(2.9)	(1.9)	(2.5)	(2.3)	(2.5)	(2.2)	(2.1)
ADDH fathers	6.3	4.4	3.6	3.2	4.8	3.8	7.4	7.2	6.7	6.7	6.7	6.9
	(2.1)	(2.8)	(2.2)	(2.3)	(2.8)	(2.6)	(2.2)	(1.9)	(2.5)	(2.5)	(2.6)	(2.9)
Control mothers	6.3	4.0	4.0	2.3	4.0	3.2	8.5	7.1	6.1	7.8	7.6	7.9
	(2.2)	(3.0)	(2.9)	(1.7)	(2.6)	(1.5)	(1.8)	(2.4)	(2.5)	(2.3)	(2.2)	(2.1)
Control fathers	6.5	4.8	4.3	3.2	4.0	3.8	8.0	6.1	6.8	6.4	6.7	6.0
	(1.6)	(2.4)	(2.4)	(1.6)	(2.2)	(1.9)	(1.9)	(2.7)	(2.6)	(2.5)	(2.0)	(2.4)
Stability												
ADDH mothers	7.1	6.4	5.5	6.0	6.7	5.4	6.7	6.0	5.3	5.3	6.4	5.6
	(2.4)	(2.8)	(2.7)	(2.9)	(2.3)	(2.8)	(2.8)	(2.9)	(2.9)	(2.8)	(2.6)	(3.0)
ADDH fathers	5.0	4.7	5.2	4.1	5.6	4.6	5.8	4.5	4.3	5.3	5.8	5.8
	(1.9)	(2.4)	(2.4)	(2.3)	(2.3)	(2.6)	(2.4)	(1.9)	(2.7)	(2.1)	(2.4)	(2.4)
Control mothers	4.8	4.1	3.7	3.3	4.5	4.4	5.1	5.4	5.5	4.5	5.5	5.2
	(2.5)	(2.5)	(2.4)	(2.3)	(2.6)	(2.1)	(3.3)	(2.4)	(2.6)	(2.2)	(2.3)	(2.4)
Control fathers	5.3	4.4	5.0	4.4	4.8	4.9	5.3	5.4	4.8	5.0	5.8	5.4
	(1.9)	(2.1)	(2.4)	(2.7)	(2.5)	(2.5)	(2.1)	(2.5)	(2.2)	(2.0)	(2.2)	(2.3)
Controllability												
ADDH mothers	6.3	5.2	4.6	4.3	4.5	4.6	8.2	6.8	6.8	7.1	7.0	6.9
	(2.5)	(2.8)	(2.5)	(2.8)	(2.6)	(2.5)	(1.8)	(2.3)	(2.4)	(2.1)	(2.1)	(2.1)
ADDH fathers	5.9	4.7	4.2	3.7	4.5	3.9	7.1	6.5	6.2	6.5	6.1	6.1
	(2.2)	(2.7)	(1.9)	(2.3)	(2.6)	(2.6)	(2.0)	(2.3)	(2.5)	(2.4)	(2.4)	(2.5)
Control mothers	6.0	3.5	4.1	2.8	4.6	3.2	7.9	5.2	5.4	6.8	5.6	7.0
	(2.2)	(2.1)	(2.9)	(1.8)	(2.5)	(1.5)	(2.2)	(2.5)	(2.6)	(2.7)	(2.6)	(2.3)
Control fathers	6.4	4.0	4.1	3.4	3.5	4.2	8.0	4.7	5.4	6.4	5.9	5.9
	(1.5)	(2.0)	(2.2)	(2.0)	(1.5)	(1.7)	(1.3)	(2.6)	(2.6)	(2.3)	(2.3)	(2.4)

[a]ADDH mothers, $n = 31$; ADDH fathers, $n = 20$; Control mothers, $n = 20$; Control fathers, $n = 20$. The lower the score, the more internal, stable, and controllable the rating.

from each other. For the Compliance condition, Play again was significantly more external than the other five situations. In addition, the Phone situation was significantly more internal than the other five situations.

Stability. A significant Families × Parent interaction was demonstrated, $F(1, 87) = 4.178, p < .04$. Fathers of ADDH and fathers of non-ADDH children offered similar ratings of stability of the causes for their children's compliance behavior. However, mothers of non-ADDH children saw the causes of their children's behavior to be more stable than did mothers of ADDH children. The main effect for Families was also significant, $F(1, 87) = 4.28, p < .04$.

The significant Families × Compliance interaction, $F(1, 78) = 4.876$, $p < .03$, indicated that parents of non-ADDH children saw the causes of compliance as being more stable than the causes of noncompliance, while for parents of ADDH children the causes of compliance and noncompliance were judged to be equally unstable. A main effect for compliance was also found, $F(1, 87) = 5.54, p < .02$.

Finally, stability ratings of the situations were found to differ significantly, $F(5, 435) = 6.33, p < .001$. Parents gave more stable ratings for the Phone and Room situations than they did for Play and Come In situations.

Controllability. A significant Families × Situations interaction was found, $F(5, 435) = 3.406, p < .005$. For parents of non-ADDH children, the Play situation was more uncontrollable than the other five situations. For the parents of ADDH children, both the Play and the Bed situations were rated as being less controllable than the remaining four situations. Across the six situations, parents of ADDH children rated the causes of the situations as less controllable than did parents of non-ADDH children, $F(1, 87) = 4.94, p < .03$.

The Compliance × Situations interaction, $F(5, 435) = 4.970, p < .001$, presents a parallel pattern of results. In the compliance condition, both the Play and the Bed situations were evaluated as less controllable than were the other four situations. In the noncompliance condition, only the Play situation was viewed as less controllable than the other situations. Across situations, causes for compliance were rated as being more controllable than were the causes of noncompliance, $F(1, 87) = 110.566, p < .0001$.

Expectation of Future Outcome. This measure assessed parent's expectations of achieving future compliance from their children. A 2(Families) × 2(Parents) analysis of variance yielded a significant effect for Families, $F(1, 87) = 36{,}163, p < .001$. As expected, parents of non-ADDH children expected more future compliance from their children ($M = 19.68$) than did parents of ADDH children ($M = 31.14$). No other significant effects were obtained.

Linkages. Expectation of future compliance was found to correlate positively with both the Stability, $r(89) = .29$, $p < .05$, and Controllability, $r(89) = .22$, $p < .05$, dimensions for compliance.

DISCUSSION

The parents of ADDH and non-ADDH children used the same causal categories to explain their children's behavior. However, ADDH parents differed from parents of non-ADDH children in their ratings of the causes of compliance on the stability and controllability dimensions. It was here that ADDH parents presented a picture reflective of their encounters with their children—that is, that compliance, being a less frequently expected event, was more unpredictable and thus somewhat more unstable and uncontrollable. This pattern does not allow these parents to take much personal credit for achieving compliance, in spite of the fact that they view the causes of compliance as being something about themselves.

Mothers and fathers differed in their dimensional ratings of noncompliance. Mothers rated these causes as being more external to themselves than did fathers. In addition, ADDH mothers rated the causes of noncompliance as being more unstable than did the other parents. Barkley (1981) has noted that mothers spend more time with their children than do fathers and hence have the opportunity to experience more noncompliance across a greater variety of situations. Also, in the present study, ADDH mothers, more than the other parents, indicated on the CPQ that their children displayed greater difficulties. Thus, ADDH mothers' tendency to rate the cause of noncompliance as unstable and having to do with factors somewhat external to themselves may be the result of the greater salience of their children's noncompliant behavior. This is a more probable conclusion than one based upon self-serving bias (Bradley, 1978) and may reflect more accurately ADDH mothers' stressful role experiences and realistic perceptions.

The fact that parents use the same words to account for their children's behavior and yet, to some extent, use different dimensional ratings for these words points out the need to take into account the respondent's idiosyncratic meaning for the attributions offered. To fail to do so leads to what Russell (1982) has called the "fundamental attribution researcher error"; that is, the researcher incorrectly assumes a shared meaning of the attribution with the respondent. Results of this study and others (Russell, McAuley, & Tarico, 1987; Sobol & Earn, 1985) support Russell's (1982) view. Respondents may say the same things. This does not indicate that their words have the same meaning.

Other methodological issues in the measurement of parental attributions remain outstanding. Although an attempt was made to get parents to rate the dimensional meaning of their attributions, the possibility exists that they focused upon the outcome and not the cause. Another issue for consideration revolves around whether attributions for hypothetical, albeit familiar, situations are the same as those experienced in vivo. Finally, there is the question of whether the dimensions used in this study match the ones that parents spontaneously use to assess their attributions for compliance.

Differential parental evaluations of the situations point out the need for a consideration of this factor in developing child management programs (Forehand & McMahon, 1981). As will be recalled, the noncompliant Play situation was perceived by ADDH parents to be very much the result of characteristics of their child. In addition, the attributions for this situation received the most extreme external, unstable, and uncontrollable ratings. This may reflect the fact that the Play situation is the only one that required the parent to interact with the child from a distance. As a result, parents may have been impeded from providing immediate feedback for the child's behavior. Also, the possibility of extrafamilial consequences may have been increased. If child management programs are to be successful, parents must learn to handle proximal situations before they confront the difficulties of distal ones.

An idiosyncratic approach to the dimensional assessment of compliance attributions suggests another strategy for enhancing clinical interventions with families of ADDH children. Bugental, Whalen, and Henker (1977) have shown that the effect of a clinical intervention is enhanced when there is a match between a child's attributions and the demand characteristics of the intervention. Since parents are the primary therapists in home-based interventions, it would be expected that their cooperation and motivation would be enhanced by matching parental attributions of the problem with the characteristics of the intervention procedure. Thus, drug therapy may prove more beneficial for ADDH children whose parents hold attributions emphasizing external and uncontrollable factors. On the other hand, parent management programs would be expected to be the better treatment of choice for children whose parents take more personal responsibility for achieving outcome.

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