ATTRIBUTIONS AND SOCIALIZATION RESPONSES IN MOTHERS OF CONDUCT DISORDERED AND NORMAL CHILDREN

by

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Attributions and Socialization Responses in Mothers of

Conduct Disordered and Normal Children

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ABSTRACT

Fifty mothers of boys age 8 - 13, recruited from family/child resources, rated compliant and noncompliant behavior of hypothetical children on several attribution, affective and parenting response scales. They also completed depression, anger and authoritarianism measures, and rated their own sons on a checklist of DSM-III-R antisocial behavior symptoms (DSM-CL). High DSM-CL scores were expected to be related to negative attribution, affective and parenting response patterns in the parents, as well as high parental depression, anger and authoritarianism. Only depression was significantly related to DSM-CL scores, although there were two other trends towards significance: parents with higher DSM-CL scores seemed to generalize children's behavior more, and tended to more blaming and less reinforcing than did parents with lower DSM-CL scores. Reasons for the lack of significance were examined, and the importance of parental depression in child antisocial behavior was discussed.
I would like to thank all the mothers who participated in this research, and the organizations who generously allowed access to their members and clients (See Appendix G). I am also indebted to the members of my committee, Dr. Robert Ley and Dr. Dennis Krebs, for their assistance, and to Dr. Ray Koopman for his invaluable comments and suggestions. However, I could not have completed this project and the rest of graduate school without the support and encouragement of my wife, Lesley, to whom I am forever indebted. Lastly, but most important, I would like to thank my Creator, who made all this possible and from whom come all good things.
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INTRODUCTION

Antisocial behavior or conduct disorder (CD) amongst children is a pervasive problem in our society, affecting the family, school, and larger community. It manifests itself in a variety of ways, including noncompliant behavior at home and in school, verbal and physical aggressiveness towards others, destruction of property, various forms of theft or robbery, truancy from school, and use of alcohol or drugs. In addition to these childhood problems, early antisocial behavior also plays a prominent role as an antecedent of adolescent and adult maladjustment and criminal activity. Involvement in antisocial behavior at a young age has been found to consistently predict adolescent and adult criminal offences, with aggressive behavior showing a stability over development comparable to that of intellectual ability (for complete reviews, see Loeber, 1982; Farrington, Ohlin & Wilson, 1986; and Olweus, 1979). Follow-up studies of antisocial children show that they are also at risk for other serious adult problems such as alcoholism and substance abuse, unemployment, physical and psychiatric illness, accidents and injuries, divorce, and dependence on social services (Kazdin, 1987; Caspi, Elder & Bem, 1987; Farrington, 1983; Robins & Ratcliff, 1979; Robins, 1966).

Considering how far-reaching the consequences of childhood antisocial behavior are, and how much each of these children could eventually cost society in various ways, it
seems imperative to delineate the factors involved in development of such behavior. If these patterns of behavior could be identified early on in development, and if the potentially malleable portions of the development process could be distinguished and understood, then the formulation of realistic and effective prevention programs would become a more viable goal (Reid & Patterson, 1989). However, because antisocial behavior is a complex phenomenon, the hope of finding a select few factors to explain it seems somewhat fruitless. In addition, because there are many levels of analysis from which one can work, there seem to be as many theories of antisocial behavior and delinquency as there are researchers in the field. Theoretical explanations of delinquency have pointed at societal factors such as social disorganization, "anomie", lack of opportunity, and economic deprivation; situational factors such as learning and modelling from antisocial parents or peers; biological factors such as lack of conditionability, biochemical imbalances, or temperament; psychological factors such as intelligence, personality, intrapsychic conflict, or poor internal control; and interpersonal factors such as abuse or neglect, poor monitoring, or coercive family interaction patterns (Kazdin, 1985; Shoemaker, 1990; Rutter & Giller, 1983).

One area of research into the antecedents of antisocial behavior that shows promise is the investigation of family process and parent-child interactions. Parenting variables have consistently been strong predictors of later antisocial
behavior and criminality (c.f. Loeber & Dishion, 1983), and parent's socialization practices have been strongly linked to child behaviors in both CD and normal populations (Hoffman, 1975; Lytton, 1982; Patterson, 1982). It could be argued that the effects of many of the aforementioned factors are mediated by the extent to which they disrupt parent-child interactions, especially in relation to socialization (Reid & Patterson, 1989). Thus, the study of these interactions may be crucial to a more complete understanding of CD, and may have the potential to link several different theories together. Although a great deal of research has been done on parent-child interactions (see Lytton, 1990a; Patterson, DeBarshye, & Ramsey, 1989; Patterson, 1982), there is one aspect of the relationship that has been relatively neglected: parental cognitive and emotional processes in relation to their children's behavior. Especially interesting are the parents' attributions of and emotional reactions to their children's social behavior. What do parents of CD children think are the causes for various sorts of behavior, and how do these cognitions effect the parents' emotional reactions and socialization practices? Do these cognitive and affective processes differ from parents of non-CD children, and if so, what might be the reasons for such differences? The current study is an attempt to answer these sorts of questions, with the hope of extending the scant knowledge in this particular area and contributing to a better understanding of CD and antisocial behavior in general.
DEFINITION AND DIAGNOSIS

According to the revised third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R; American Psychiatric Association, 1987), CD is defined as "a persistent pattern of conduct in which the basic rights of others and major age-appropriate societal norms or rules are violated" (p. 53). Common behavioral markers of CD include covert stealing, physical aggression (against people, animals or property), lying, and cheating in games or schoolwork. Other behaviors may include truancy from school and running away from home. The CD diagnostic category is divided into three subtypes: "group type", "solitary aggressive type" and "undifferentiated type". Group type refers to conduct problems done mostly in the company of peers, and it is equivalent to the former DSM-III designation of "socialized conduct disorder". Solitary aggressive type is distinguished by physical aggression against others initiated by an individual, and corresponds to the earlier DSM-III diagnosis of "undersocialized aggressive conduct disorder". Undifferentiated type is a category for children with a mixture of features who cannot be classified as either of the other two types, and may comprise the largest group of CD children (DSM-III-R).

Although these subtypes are conceptually useful and theoretically possible, they have not been consistently supported by research (Lytton, 1990a). Many researchers have
found it more useful to view CD (and antisocial behavior in general) as a unitary dimension of behavior, since, in practice any distinction between sub-categories becomes blurred, and different types of childhood behavior all predict adult maladjustment equally well (c.f. Robins, 1978). Much of the literature on antisocial behavior in children and adolescents thus classifies CD, delinquency, aggressiveness and antisocial behavior together, with only the occasional study identifying characteristics specific to one or the other. This lack of definitional clarity makes the job of sorting out evidence difficult, but the dearth of studies using DSM-III-R criteria necessitates that any review of the field must include arbitrary decisions about what constitutes CD and what does not (Dodge, 1990). Fortunately, although the various definitions used in the literature are not identical, they overlap to a great extent with the DSM-III-R CD criteria, making the necessary use of these research findings in any background discussion quite valid (Lytton, 1990a).

The use of the DSM-III-R diagnostic category is not without its problems. Obviously, since antisocial behavior in children is not a homogeneous phenomenon, in that it covers a wide variety of behavior patterns, CD represents an arbitrary subgroup of this spectrum. Thus, individuals displaying isolated or sporadic antisocial acts, or antisocial behaviors not included in the symptom list would be excluded from a diagnosis of CD. Even within the CD group there exists a huge variety of antisocial behaviors, prompting researchers and
clinicians to refer to it as a residual diagnosis or diagnosis by default (c.f. Dodge, 1990). However, such a criticism is one that can be leveled at any system of categorization in the social sciences, and simply highlights the choice that must be made between specificity and generalizability. The CD category, although not perfect, certainly captures a large portion of possible antisocial behavior in children. Barring any further gains in delineating sub-categories that are supported by research, this category remains useful in setting a diagnostic standard for clinical and research purposes.

Two other disorders that are closely linked to CD are attention deficit hyperactive disorder (ADHD) and oppositional defiant disorder (ODD) (DSM-III-R: APA, 1987). ADHD is often associated with CD, there being a great deal of overlap in populations. This has resulted in many studies including children with both diagnoses in the clinical group. However, there is evidence that they are indeed separate entities: factor analytic studies consistently find separate but highly correlated factors for CD and ADHD (Lytton, 1990a). Especially relevant to this study is the fact that familial antecedents were found to differ for the two groups. On the other hand, attribution research has shown that parents from these families often show the same negative biases in cognitions found in other distressed families (c.f. Sobol, Ashbourne, Earne, & Cunningham, 1988). Since a pure CD clinical group was very difficult to obtain, boys with a possible or definite ADHD diagnosis were included in the
study. ODD is a pattern of behavior very similar to CD, but without the serious violations of the basic rights of others. Since it seems to be a milder form of CD, and often is an antecedent to it, it also will be measured and included in this study.
Two very thorough quantitative analyses of longitudinal studies have investigated the effect of family variables on antisocial behavior (Loeber & Stoutham-Loeber, 1986; Loeber & Dishion, 1983). These family influences can be classified into four general categories: demographic factors (e.g. socioeconomic status, large family size), parental characteristics (e.g. criminality), parental management techniques (e.g. lack of supervision, strict discipline) and rearing climate (e.g. parental rejection) (Lytton, 1990a). Although the specific interpretation of the two studies seems to differ, depending on who is citing the study (c.f. Reid & Patterson, 1989; Lytton, 1990a), it seems clear that some of the best predictors of later antisocial behavior and criminality are parenting variables — especially lack of supervision or monitoring, a lack of positive involvement with the child, and harsh or inconsistent discipline. These variables were better predictors of adult antisocial conduct than parent criminality, socioeconomic situation, or early behavior problems exhibited by the child. Other studies that have found similar conclusions include McCord, McCord, & Howard, 1963; West & Farrington, 1973; Olweus, 1980; and Dishion, Patterson, Stoolmiller, & Skinner, 1991). In addition, many of these same variables have been associated with non-delinquent disturbances of conduct (Rutter & Giller, 1983).
Since most of these results are based on quite gross measures of family functioning taken from interview or self-report data, detailed studies involving observation of family interaction have attempted to clarify the processes that might be involved in the development of antisocial behavior. According to the review of this field by Rutter & Giller (1983), parents of antisocial children have been found to differ from parents of non-disordered children in being much more punitive, in issuing more commands and directives, in being less likely to perceive deviant behavior, in being more likely to positively reinforce deviant or negative behavior, in reinforcing positive behavior less, in being more likely to continue coercive or negative interactions with their children, in giving more vague commands, and in being less effective at stopping their children's problem behavior.

There has long been a debate on the direction of parent-child effects in studies of socialization, and research into CD and antisocial behavior is no exception, with the debate continuing to the present day (c.f. Lytton, 1990a, 1990b; Dodge, 1990; Wahler, 1990). Part of the problem is that most of the studies associating parenting variables with antisocial behavior are correlational, which does not permit the statistical determination of parent or child effects on the variance. Although the solution to this shortcoming would seem to be a longitudinal design, a problem could still exist, depending on the nature of the study; for instance, very early child effects could lead to later measures of parental
rejection or harsh discipline and still later antisocial behavior. However, the causal nature of at least some of these variables can be shown by four different types of research evidence, summarized by Rutter & Giller (1983). First, parents of nondisordered children were able to make their children behave worse by issuing more commands. Second, investigation of sequences of family interactions showed that hostile parent behaviors directed at the child increased the likelihood that the child's antisocial or aggressive behavior would continue. Third, behavioral interventions with disturbed families which focused on changing patterns of coercive interactions succeeded in reducing the children's aggressive and hostile behavior. Fourth, family variables associated with antisocial behavior and delinquency are also predictive of recidivism within a delinquent group. Other evidence includes studies showing that parenting practices are related to antisocial behavior even when child difficulty is ruled out (Loeber, Stoutham-Loeber & Green, 1990 - cited in Lytton, 1990), and a series of structural equation modeling studies that support the causal relation of parenting practices to child antisocial behavior (Patterson, 1986; Patterson et al., 1989). All of this evidence taken together certainly shows that parental practices have some effect on CD, and that this effect is to some extent independent of the child's disposition (Lytton, 1990a).

Sameroff (1975) has distinguished three different models of child development: 1) the main effects model, which pits
dispositional and environmental factors against each other in a win-lose situation, 2) the interactional effects model, which explains child outcomes by the interaction of dispositional and environmental factors, and 3) the transactional effects model, in which child outcomes are a result of recurring reciprocal interactions over time between the environment and the child. The fact that it is a complex parent-child interaction under investigation makes it difficult if not impossible to completely disentangle the different effects, thus ruling out the main effects model. Indeed, most researchers now accept that it is the interactional and transactional models that must be used to explain child outcomes, making the nature vs. nurture question one that no longer needs to be asked in the field (Dodge, 1990).

Patterson and his colleagues at the Oregon Social Learning Center have developed a model of antisocial behavior based on two decades of detailed observational study of family interactions in the home (Patterson, 1976; 1982; 1986; Reid & Patterson, 1989; Patterson et al., 1989). This model is termed the "performance theory" of coercive family processes, and provides a cogent explanation of child antisocial behavior which has received a great deal of empirical support. One of its strengths is the fact that it is an interactional and/or transactional model, thus taking into account all the complexities of parent-child interaction. Another strength is the relative specificity with which it can explain family
interactions, because of the naturalistic, microanalytic approach taken in most of the research. A third strength is its ability to integrate many of the possible theories of antisocial behavior by demonstrating that the effects of the different variables implicated in antisocial behavior, such as SES, family history, marital discord, child temperament, and parental mental health problems, are all mediated by the extent to which they disrupt the everyday socialization of the child.

Patterson and his colleagues assert that antisocial behavior is "a pattern or trait that is learned, strengthened and maintained by the social interaction in which it is embedded" (Reid & Patterson, 1989). Thus, antisocial behavior cannot be developed in isolation, but requires the involvement of others in the developmental process. In the early stages of development, the most powerful determinants are found in the interaction between the child and his family. As the child develops, the process will be increasingly influenced by interactions with peers, teachers and others. However, even when the child spends an increasing amount of away from home as they get older, the parents will still exert a powerful effect on the process through their monitoring (or lack of it) of the child's behavior and activities, and through the boundaries they set and consequences they use to enforce them. An illustration of the developmental process from early childhood to adolescence is shown in Figure 1.
The process by which an antisocial pattern of behavior is developed in the home has been called 'early basic training in aggression' by Patterson (1982). As the young child demonstrates aggressive, demanding and aversive behaviors, and the parents do not deal with these behaviors consistently and effectively, he learns to develop this pattern of behavior as a way of dealing with others. Parental discipline practices that contribute to this include a lack of clear household rules, a lack of adequate monitoring of the child's behaviors, a lack of labeling of behaviors as deviant or non-deviant, a lack of contingency in both positive reinforcers for prosocial behaviors and effective consequences for negative behavior, a lack of effective problem-solving, and a tendency to react to these behaviors in an irritated and
nagging fashion, while consequently failing to follow through on discipline. Other characteristics that also may contribute include a lack of encouragement or warmth towards the child, frequent and overly harsh punishment, and a lack of pleasurable family interactions. Anything that increases the likelihood of either the parent or the child acting in a coercive and irritable manner can set up and keep the coercive cycle going. Once the cycle is in motion, the ineffective discipline attempts and irritable reactions by the parent and the aggressive behavior by the child will become stable traits that maintain each other. Thus, by the time the child begins to interact more in the community and in school, he has developed a pattern of interpersonal interaction that will generalize to a variety of settings, and create similar coercive cycles to those at home.

A key element in the starting and maintenance of these coercive cycles is what these researchers have termed "nattering". They hypothesize that the eliciting stimulus for these interchanges is parental anger and irritation, and not particular child behaviors. In response to the feeling of irritation, the parent nags, issues commands, and makes various aversive comments, thus communicating to the child anger and impatience rather than information about what the parent actually wants. The child responds by more aggressive behavior, and the process escalates. Because it is affect that is the stimulus, the cycle can soon be set in motion.
without any great deviance on the part of the child, as long as the parent is in an angry or irritable mood.

There is now a great deal of empirical evidence to support the coercive process model, both from cross-sectional and longitudinal studies. Several studies show that even normal pre-school children will display a mild aversive behavior every 4 minutes, and a clearly coercive one every 15 minutes; their parents display similar rates (Forehand, King, Peed, & Yoder, 1975). However, aggressive children and their mothers display approximately twice those rates. This makes it clear that children have thousands of opportunities to learn positive or negative patterns of interpersonal functioning in the first years of life; that parents are involved in the coercive process (particularly mothers); and that the increased coercive/aggressive behaviors seen in antisocial children and their mothers demonstrates that these transactions are involved in the development of antisocial behavior (Reid & Patterson, 1989). In addition, the parents of antisocial children are also much less effective in terminating the aggressive behavior of their children (Reid, Taplin & Loeber, 1981). For normal parents, their children stopped the aversive behavior 86% of the time after a parental discipline response, while antisocial children only stopped their coercive actions 64% of the time.

Structural equation modelling studies also showed clear and significant paths between parental discipline and child coercive behavior in the home, between disrupted discipline
and poor monitoring, between poor monitoring and child antisocial behavior across settings, and between coercive child behaviors in the home and antisocial behaviors in other settings; with the coercive model accounting for 40% of the variance (Patterson, 1986). Structural equation models in a longitudinal study currently underway also lend support to the coercive model (Reid & Patterson, 1989). Additional evidence for the model comes from intervention studies, in which parents were taught to alter the coercive cycles which occurred in their family, with a resulting reduction in their child's aggressive behavior (Patterson, 1982).

Taken together, these results provide consistent support for concurrent and longitudinal relationships between parental discipline practices and monitoring, and the development of antisocial behavior. However, almost all of the research focuses on behavioral aspects of the parent-child interaction, with very little work being done on the cognitive and affective aspects of the parent-child relationship. In particular, it would seem that investigation into the cognitive processes of parents, who are the agents of socialization, may be of help in determining what makes the interactions in these distressed families different from those of families which are not distressed. The parent's perception of their children's behavior, in particular the causes and motives behind the behavior, would be expected to have a great impact on the parent's affective and behavioral reaction to the child, and thus directly affect the coercive cycle already
implicated in the development and maintenance of antisocial behavior.
Much of the socialization research until recently has neglected to look at cognitive aspects of parenting, despite the fact that parents are involved in ongoing analysis of and decision-making in relation to their children's behavior (Dix, Ruble, Grusec & Nixon, 1986). For instance, a parent who is faced with an aversive behavior of their child, such as non-compliance, must decide why this behavior is occurring, whether the child should be held responsible for the behavior or excused because of developmental constraints or extenuating circumstances, and what the best response to the child would be. In addition, parents may also be guided in their choice of discipline response by an affective reaction that may or may not be related to their cognitions about the child's behavior. Attribution theory provides a systematic theoretical and methodological framework for studying these cognitive and affective aspects of parenting and their relationship to socialization practices (Dix & Grusec, 1985). Though developed to explain adult social behavior, its usefulness in application to parent-child interactions has become quite apparent, and such application is becoming more common in both normal and clinical parent populations. The attribution research stresses that parenting behavior will depend on an ongoing assessment of the child and their behavior, especially inferences about traits, needs and motives of the children, the situational forces operating on
the children, and the causes of the children's behavior (Dix et al., 1986).

Before attributional models of parent-child interaction can be discussed, the context in which parental perceptions and attributions take place must be described. Dix and Grusec (1985) outline several distinct features of this context that distinguish it from adult social interaction, and may have an important influence on the process of attribution. First of all, children are not mature, and are thus constrained by developmental limits that are beyond their control. Because free and unconstrained choice of an individual is a prerequisite for inferences about their behavior and personality, children's behavior should most likely be seen as resulting from deficits in knowledge and skill rather than from intentions of and dispositions in the child, depending on the level of development. Biases in parental perceptions could be a product of unrealistic expectations of the child based on a lack of knowledge of children's development or a mistaken use of one's own adult motives and level of knowledge. These biases would most likely affect the parent-child interaction, and could have implications for socialization.

Second, children are not as consistent or unchanging as most adults presumably are, but are continually undergoing rapid growth and development in many diverse areas. Thus any attributions made about the children's behavior must take into account the changing needs, motives, knowledge and abilities.
of the child. As the child develops and becomes more consistent, parental attributions should also do the same, changing less from situation to situation. Third, children are for the most part much less powerful than the adults they interact with. Consequently, much of their behavior can be attributed to external pressures such as adult influence, rather than to dispositions resting in the child. Although this may not always be taken into account by the parent, it certainly could have important effects on perceptions and attributions if noted. (This effect should be true especially for younger children, but would be expected to diminish as children matured.) Finally, parents are involved in an intense and highly emotional relationship with their children, acting as socializers and caretakers to them. This makes it difficult for parents to be unbiased judges of their children's behavior, as the behavior has personal relevance to them. For instance, the child's behavior may either fulfill or negate parenting goals or be seen as reflecting on parents' competence in parenting.

There are several attributional models developed out of research into adult social cognition that can be applied to parent's perceptions of their children's behavior. Heider (1958) formulated the original theory, while Jones and Davis (1965), Kelley (1973) and Weiner (1979) all derived their models from it. They are for the most part compatible, and have all been applied in various forms to parent-child
research. However, the models all have distinct foci, each emphasizing a different aspect of the attribution process.

THEORIES OF ATTRIBUTION

Heider's Attribution of Responsibility Model (1958)

Inferences about whether individuals are responsible for the effects of their behavior are especially important when assessing credit or blame, something parents must do on a daily basis when socializing their children. Thus, assessment of credit in relation to positive behavior may have an effect on reinforcement and praise, while assessment of blame in relation to negative behavior likely affects control and punishment (see Fincham and Jaspers, 1980). Heider proposed three variables central to attribution of responsibility: an effect that is caused by an actor, foreseen by the same actor, and in which there was definite intent. The effect of these variables are moderated by assessment of mitigating circumstances, such as environmental pressures that would cause most people in similar circumstances to act in a similar way (i.e. to kill in self-defence). When applied to parental perceptions of their children, this theory predicts that attributions will be affected by judgements about what the child could foresee and what they intended with their behavior. These child age-related beliefs could reduce responsibility assigned to children for their behavior if the
parent believes it to be affected by developmental limitations.

Jones and Davis' Theory of Correspondent Inference (1966)

This theory focuses on how attributions of disposition in the actor are formed, also an important aspect of parenting. For instance, whether the parent decides that a particular negative behavior is caused by a malicious disposition or by age-related deficits in knowledge will certainly differentially affect the parent's response. The authors propose that dispositional attributions will occur when the actor's behavior is believed to be freely chosen and intended. Intentionality, in turn, is affected by three factors: the knowledge that the behavior would produce the observed effects, the desire to produce those effects, and the ability to produce the effects if desired. Thus, parents will make dispositional attributions for children's behavior when they feel its effects were freely chosen, known or foreseen, desired, and congruent with the child's abilities. This implies that parents must be constantly assessing whether the social knowledge and skill possessed by the child is sufficient to have intentionally produced the observed effects of the behavior. Of course, this is an ideal model of ideal parents, and real parents are rarely this logical, rational and unbiased in every situation; nonetheless, it is a theoretically important model which has implications for understanding parental perceptions of their children.
Kelley's Covariation Model (1973)

Like the previous theory, this model also emphasizes peoples' inferences about the causal locus of behavior, formulating this dimension in terms of internal versus external causes. In particular, individuals are thought to come to logical conclusions about the social behavior of others through the use of three types of covariation information: distinctiveness, consensus and consistency. An internal attribution is made if people believe that very few other people would act this way (low consensus), that the actor acts this way across many different situations (low distinctiveness), and that given this same situation, the actor will consistently act this way (high consistency). Conversely, an external attribution is made when people believe that most other people would act this way (high consensus), that the actor does not act this way in other situations (high distinctiveness), but that given this situation, the actor usually acts like this (high consistency). Consensus has the greatest implication for parental attributions in that behavior that is considered non-normative may be thought of as reflecting dispositions in the child, while behavior that is considered normal will be thought of reflecting developmental (external) causes. In addition, use of a Multiple-Sufficient-Cause (MSC) schema may discount internal attribution when other external constraints are present and salient to the child.

This model is based on several attributional dimensions which are thought to impinge on affective and behavioral responses to other's behavior. This has important implications for socialization, for it predicts that parent's responses to their children's behavior will be based on their inferences about the cause of this behavior along the four dimensions of locus (internal-external), stability (stable-unstable), controllability (controllable-uncontrollable) and generality (general/specifc). Inferences about locus determine whether actions reflect actors or situations in a similar manner to other models. Inferences about stability are thought to influence responses by determining expectations about the future recurrence of that behavior. Inferences about generality operate in a similar manner, affecting expectations of recurrences in other situations. Inferences about control indicate how much influence an actor has over a behavior, and to some extent determine attributions of intent and responsibility. This last dimension may be the most important one in socialization because it could have the most influence on parental rewards and punishments. Affect also plays an important role in this model as the mediator between attributions and responses, which also has implications for socialization (i.e. how upset a parent becomes with a child may depend upon attributions for the child's behavior and may in turn affect the type and force of punishment chosen).
RELATIONSHIPS AMONG THE VARIABLES

One of the most important aspects of parental attribution may possibly be the relationship between attributions of causality, attribution of responsibility, and administration of rewards and punishment (Dix & Grusec, 1985). Much of the research in adult social cognition has equated casual attribution with responsibility; however, internal causation is neither a necessary or sufficient condition for assigning responsibility (Fincham & Jaspers, 1980). It may well be that causal attributions are not directly related to punishment, but affect attributions of responsibility, which consequently affect choice of punishment (c.f. Weiner, 1980). The relationship between responsibility and punishment may also be mediated by inferences of control and effort. One thing is clear: the interrelationships among these various aspects of attribution are complex, and need much more research specifying their exact nature.

ATRIBUTIONAL BIASES

There are several attribution biases that have been consistently observed in research on adult social cognition, and several of these may have significant implications for parent' perceptions of children. The first is the fundamental attribution error (Jones, 1979), a tendency to make trait or dispositional attributions for behavior while underestimating
the importance of situational factors. Application to parent attribution would suggest that parents may fail to take developmental constraints into consideration, thus making dispositional attributions that are not warranted. This in turn may lead to punishment for something that may not be within the child's control, but is actually reflecting developmental limitations. The second is the self-serving bias (Heider, 1958; Bradley, 1978), which is a tendency of people to protect and enhance their self-esteem, and cast themselves in a favorable light. For instance, a parent could attribute a child's negative behavior to the child's disposition rather than seeing themselves as an ineffective socialization agent. Conversely, a parent may also attempt to cast the child in a most favorable light, because the child is seen as an extension of him/her self (c.f. Brown, 1986; Taylor & Kouvemaki, 1976). This could result in a positive bias where positive behavior is seen as stemming from stable personality dispositions in the child, while negative behavior is viewed as caused by external or unstable factors. A third bias is termed "personalism" (Jones & Davis, 1965), which is an inference by an individual that a specific behavior was intended to affect them. These authors propose that evaluations of others are intensified when individuals think others are purposely trying to gratify or hurt them. Thus, if a parent thinks that an infant or toddler is intentionally trying to anger them or interfere with their activities, this will certainly affect both their emotional and behavioral 

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reaction to the child. Related to this concept is the potential bias that affect can have on perceptions. For instance, behavior that elicits strong emotions may also affect the attribution process either by distorting information processing or by increasing the extremity of evaluations of behavior (Dix & Grusec, 1985). (This process reverses the relationship between affect and attributions discussed earlier. However, there is empirical support for both relationships, demonstrating that affect may play several different roles, none of which are yet clearly understood.)

ATTRIBUTION-BEHAVIOR RELATIONS

The relationship of cognition and behavior has long been a problem in psychology, with inconsistencies being found in a variety of research areas. Since particular attributions will not always lead to the same behaviors, it is obvious that factors other than parental perceptions will necessarily be involved in determining parenting behaviors (Dix & Grusec, 1985). One of these might be the expectations and standards that the parents set for their children's behavior. For instance, the same behavior could be responded to very differently by two parents (even within the same family), because the behavior violates the standards of one parent but not the other. Attributions cannot affect socialization behaviors if there is no belief in a need for socialization in a particular situation. Related to this are beliefs about
the type of punishment that is the most effective, and the amount of force that is appropriate to use. In this case, attributions will modify existing response sets rather than affecting the actual choice of punishment and force directly. A second factor might be the salience of a particular domain. For example, in situations where compliance is needed immediately, such as behavior that threatens the child or others, the response chosen by the parent most likely has very little to do with beliefs about causality or responsibility. Very mild or routine negative behaviors may elicit automatic parent responses which also would not be affected by any sort of attributional analysis. A third factor will be differences in parents' coding and processing of information about their children's behavior. The amount of monitoring of child relevant information will certainly differ between parents, an aspect particularly important to CD. Parents that do not pay much attention to social information about their children may not base their responses to children's behavior on analyses of this information. Fourth, the fact that attribution may mediate behavior through affect also has implications for the relationship between attribution and behavior.
ATTributions and Socialization

The application of attributional theory to parenting research is a fairly recent phenomenon, with the majority of the theoretical and empirical work in this area being done by Theodore Dix and his colleagues (Grusec, Dix & Mills, 1982; Dix & Grusec, 1983, 1985; Dix et al., 1986; Dix, Ruble & Zambarano, 1989; Dix, Reinhold & Zambarano, 1990; Dix & Lochman, 1990; Dix & Reinhold, 1991). Since the goal of this group has been to outline the attribution-socialization process in detail, their primary focus has been parents and children from normal families. Other researchers have investigated attribution processes in clinical families using more global approaches and measures.

The studies in this area can be roughly divided into two categories: those that utilize ratings made to stimulus behaviors, and those that code attributions from interview or observational material. In the former, parents are presented with vignettes of child behaviors and then asked to make various ratings in response to these scenarios. These stimulus behaviors may take the form of printed, photographed or videotaped scenarios, and may involve either hypothetical or parents' own children. The content of these scenarios has usually consisted of positive and negative behaviors parents normally have to deal with in the everyday task of socializing their children (e.g. compliance and noncompliance to parental requests; moderate negative behavior such as lying, not
following the rules, pushing other children, selfishness, or breaking a toy; moderate positive behavior such as helping someone, doing chores or sharing). In the latter method, parents are interviewed about their children's behavior, or are observed interacting with their children. These transcripts are then coded using various schemes to produce attributional or behavioral scores.

It is one of the goals of the current study to integrate the more detailed findings from normal families with the broad results obtained from clinical families, in order to provide a clearer picture of attribution and socialization processes in the families of CD children. This section will review the relevant research conducted with parents and children from normal families, while the next section will look at studies done with parents drawn from clinical populations.

INTENT, CONTROL AND CAusal ATTRIBUTIONS

One hypothesis suggested by attributional theory is that parents will infer that a child intended the effects of their behavior if they view the child as desiring the effects of their behavior, understanding the effects this behavior would have, having the ability to produce those effects if desired, and being free from external constraints on the behavior. Consequently, this inference of intent should lead the parent to decide that personality dispositions are the cause of the child's behavior (c.f. Jones & Davis, 1965; Kelley, 1973).
Because knowledge and ability increase with age, one way of testing this hypothesis is to look at parent's attributions of children at different ages. With increasing age, behavior should be seen as increasingly controllable and intentional, thus leading to more dispositional attributions on the part of the parents.

Four studies using vignettes involving the behavior of hypothetical children explored this hypothesis. They found that, as predicted, parents made increasingly dispositional attributions about the children's positive and negative behavior as the age of the child increased (Dix & Grusec, 1985; Dix et al., 1986). This change was also accompanied by age-related changes in other predicted inferences, with children's behavior being viewed as increasingly under the child's control, more intentional and decreasingly caused by external factors. In addition, the attributions of intent and control strongly correlated with dispositional attributions across all age levels. Since parent variables had no impact on these effects, this result can be seen as supporting the first steps of the model. Similarly, in a study utilizing hypothetical behavior of mothers' own children, Dix et al (1989: Study 2) found that, as age increased, mothers expected more of their children and inferred that the children had greater knowledge, capacity and responsibility for their negative behavior. In another study using material drawn from mother's real experiences with their children, Gretarsson and Gelfand (1988) also found partial support for this aspect of
the attributional model. Older children's negative behavior was seen as more dispositional than that of younger children, but no differences between the age groups were found for positive behavior. Although the evidence is not unequivocal, the findings from these age-effects studies seem to indicate that attributions of intent and control are associated to causal attributions in the manner predicted by attribution theory.

ATTRIBUTIONS AND AFFECTIVE RESPONSES

Another prediction stemming directly from Weiner's (1979; 1980) model is that parents' affective reactions to children's behavior will depend on the parents' attributions of the behavior. Negative acts thought to be internal, stable and under the child's control should cause the parents to be more upset, while the same attributions about positive behavior would elicit emotions of pleasure. Partial support for this relationship was found by Dix and Grusec (1985), where parents were more upset with hypothetical children's negative behavior that was rated as more intentional, dispositional and known to be wrong (for 'failures to be altruistic', but not for norm violations). Parents were also more pleased with positive behavior (altruism) they viewed as being more internal. Dix et al. (1986) replicated and extended this finding to cover several kinds of both positive and negative behavior: the more intentional, dispositional and
controllable negative behavior was viewed, the more upset
counts of negative behavior were, while the same ratings for positive behavior
were related to being more pleased. Dix et al. (1989: Study 2) found that parents who attributed high competence and
responsibility to their children were also more upset with
their children's hypothetical negative behavior. In an
experiment which manipulated a hypothetical child's knowledge
about their negative behavior, mothers reported being much
more upset with children who knew that they were acting badly
than those who did not have this knowledge (Dix et al. , 1989:
Study 1). Dix and Reinhold (1991) found that mothers who
watched videotapes of child noncompliance were more angry with
behavior rated as more intentional, dispositional and under
the child's responsibility. And finally, Dix and Lochman
(1990) found that mothers of normal children who watched
videotapes of parent-child interactions reported much more
upset at negative behavior that was rated as more
dispositional and under the child's responsibility. All in
all, the evidence supports the relationship between
attributions and affect predicted by an attributional model,
especially for children's negative behaviors.

Another prediction made for this relationship that
relates to the previous section is as follows: if parents
infer that children, as they age, increasingly understand,
control and intend behavior, and if these parental
attributions are connected to affect, then parents should have
increasing affect about behavior as children develop. Dix and
Grusec (1985) found that age-related changes in attributions of intent, knowledge and dispositions for negative behavior of hypothetical children were accompanied by an increase in parental upset, but that positive behaviors were related by a decrease in positive affect. Dix et al. (1986) replicated this finding for negative behavior, but found no relationship at all between affect and developmental changes in positive behavior. Dix et al. (1989) also replicated the finding for hypothetical negative behavior of the parents' own children. It appears that age-related changes in parental affect find support in studies looking at negative behavior, but no clear relationship has emerged for prosocial behavior.

ATTRIBUTIONAL BIASES

One bias that has been noted in much of the child development literature is the positive bias that parents of normal children seem to have in relation to their children's behavior (Goodnow, Knight & Cashmore, 1986; Sameroff & Feil, 1985). This bias would be predicted by attribution literature to take the form of viewing children's prosocial behavior as stable and dispositional, and their antisocial behavior as temporary and situationally caused (See above section on attributional biases). The results of Dix et al. (1986) support this hypothesis in relation to hypothetical children, with positive behavior being rated as more intentional, stable, general, internal and controlled, and less external,
than negative behavior. Gretarsson and Gelfand (1988) replicated this finding with children's real behaviors, finding that mothers rated their children's positive behavior as more internal, stable and responsible, and their negative behaviors as transitory and externally caused. However, although there seems to be support for a positive attributional bias on the part of parents, it is not yet clear whether this represents a self-serving bias or a cultural expectation for children in general to be naturally and fundamentally good (Gretarsson & Gelfand, 1988; c.f. Bradley, 1978 and Nisbett & Ross, 1980 for a general summary of these opposing views).

ATTRIBUTIONS AND SOCIALIZATION RESPONSES

An attributional model also predicts that socialization-related cognitions and responses will be related to the attributions made about the children's behavior. For instance, whether the parent thinks it is important to respond or not, the type of response chosen and the force of punishment used on negative behaviors may all depend on attributions of cause and responsibility, and be somewhat more indirectly related to control and intent.

For the variable of importance of responding, there were mixed findings. Dix and Grusec (1985) found in Study 1 that for one type of negative behavior (failures to be altruistic), importance of responding increased with ratings of
disposition, intent and rule knowledge; while in Study 2, they found the same relationship for all types of positive and negative behavior. Dix et al. (1986) found in Study 1 that for one type of negative behavior (failures to be altruistic), the importance of responding increased with dispositional attributions of disposition, intent and rule knowledge, while for the other types of negative behavior (norm compliance), it was related only to dispositional attributions. Study 2 found no relationships between importance of responding and any of the attribution measures, although there were nonsignificant trends in the expected direction. Dix et al. (1989: Study 1) found some complicated interactions which indicated that for certain kinds of negative behavior (selfishness), an increase of rule knowledge was accompanied by an increase in the importance of responding. Thus, although there seems to be some support for the connection between attributions and the importance of responding to children's behavior, it is not unequivocal. This may be related to the role of affect as mediator, which is discussed below.

Dix et al. (1989: Study 1) found that mothers thought responses to negative behavior should be more power-assertive and less inductive when a hypothetical child knew that they were misbehaving than when they did not possess this knowledge. In Study 2, Dix et al. they found that mothers who attributed more knowledge, capacity, knowledge and responsibility to their children said they would respond with greater sternness and disapproval, and would be more forceful
in their punishment of the child. These same mothers also rated prototypes of discipline that included punishment more favorably than those examples which did not include punishment. Dix and Reinhold (1991) found that mothers who rated videotaped negative behaviors as more intentional, dispositional and responsible recommended much stronger expression of disapproval. And Dix and Lochman (1990) found that mothers watching videotapes of parent-child interactions recommended greater use of force if the child was thought to be more responsible for the noncompliant behavior. Thus, the relationship between attributions and force of socialization responses is also supported, to a greater extent than the importance of responding variable.

PARENTING IDEOLOGIES

Research has suggested that stable beliefs and values about childrearing can influence the inferences parents make about child behaviors and subsequently their response choices (Dix et al., 1989). It has been argued that authoritarian parents ignore developmental limitations of the child (Baumrind, 1973), which would lead to the prediction that these parents would think that children understand, control and intend their behavior more than would nonauthoritarian parents. Although typically conceptualized as a punishment-orientation, this cognitive set could actually be seen as influencing responses to negative behavior through
attributions about the behavior. Dix et al. (1989) found that mothers higher on authoritarianism had higher expectations and inferred higher levels of knowledge, capacity and responsibility in their children than did low authoritarian mothers. Authoritarian mothers also reported that they would be more upset with their child, would respond with greater sternness, would use more force in punishment, and rated punishment responses as more desirable than nonauthoritarian mothers. A series of regression analyses showed that these mothers preferred power-assertive responses because they attributed greater competence to children: all the power assertion dimensions were predicted by attributions independent of authoritarianism, but none of the power assertionive dimensions were predicted by authoritarianism independent of attributions. Similar analyses of discipline prototypes also supported this conclusion, albeit not quite as strongly. Dix and Reinhold (1991) found similar results, with higher authoritarianism being related to greater intent and responsibility, as well as more emotional upset and stronger expression of disapproval to videotaped misbehavior. Regression analyses revealed that attribution mediated relations between authoritarian ideology and mothers reactions, replicating the earlier finding by Dix et al. (1989).
PARENTAL MOODS

It has been hypothesized that transient changes in affective states may influence socialization by biasing attributions and other cognitions in relation to children (Dix and Grusec, 1985; Goodnow, 1985; Dix & Reinhold, 1991). Of particular interest to the present study is the idea that negative moods may make parental perceptions of children more negative. This cognitive-distortion model of the effects of mood is consistent with research which has shown that distressed parents of various kinds perceive children's behavior as more negative than normal parents (Griest, Wells, & Forehand, 1979; Conger, McCarty, Yang, Lahey, & Kropp, 1984; Larrance & Twentyman, 1983; Dix & Lochman, 1990). In an initial test of the hypothesis, mothers who recalled events that made them angry placed more blame on children for negative behavior than did mothers recalling emotionally neutral events (Dix & Reinhold, 1991). However, this effect, as well as the others cited above could all be seen as reflecting an outcome of daily life with difficult children or as causing children to behave in ways that are more negative than other children (Patterson, 1982). To support the cognitive distortion hypothesis, a relationship between negative mood and negative judgements of children would have to be observed when parents experiencing different moods assess the same child engaging in the same behavior. Dix et al., (1990) found just such support in a study examining
mothers' attributions about videotaped children assessed during the natural mood swings that occurred in their home. Angry moods predisposed mothers to expect interactions involving compliance to be negative, to make negative attributions about noncompliance once it occurred, and to react in a negative fashion to these behaviors. This bias was quite pervasive, occurring in both ambiguous and noncompliance conditions and for judgements of both videotaped and mother's own children. It had an effect on various cognitions derived from the attribution-socialization model, including expectations, causal attributions, attributions of responsibility, and ratings of affect and disapproval responses. Thus, although some of the relationships of negative moods and negative judgements may reflect actual differences in the behavior of children whose parents are experiencing negative moods, these results confirm that moods can bias judgement negatively, even when children's behavior is constant (Dix et al., 1990).

ATTRIBUTIONS AS MEDIATORS OF AFFECTIVE/SOCIALIZATION RESPONSES

The preceding review of the research has shown that parents' attributions about children's behavior are associated with parental affective and behavioral responses. However, there are alternate explanations to an attributional model that may account for parental responses. For example, it could be argued that actual child behaviors are determining
parental socialization responses, perhaps even independently of attributions. Grusec et al., (1982) found that both severity and type of misdeed have an impact on parents responses. More serious misdeeds produced more anger and upset, more frequent interventions, and a greater likelihood of the child being forced to perform the appropriate behavior. In addition, antisocial acts (lying, stealing and physical aggression) produced greater upset, and more likelihood of punishment than failures to be altruistic (not helping, not sharing, not showing concern). Grusec and Kuczynski (1980) found that the discipline responses were determined more by the nature of children's misdeeds than by any trait found in the parent, such as disciplinary style. Dix et al. (1989: Study 2) also investigated the relationship between behaviors and responses, finding that child behavior had significant effects on various socialization and affective responses. However, when the analyses were repeated using average attribution scores as a covariate, most of the relationships were no longer significant, with reductions in F values of up to over 75%. This outcome makes it clear that a substantial amount of the variance shared by child behaviors and parental affective and behavioral responses is due to their mutual relationship with attributions about the children's behavior.

Another possibility is that parent's emotional reactivity or moodiness determines their socialization responses to their children's behavior. For instance, it has been found that some parents are more generally reactive to a variety of
stressors, and respond with greater arousal and negative affect to behavior of children (Vasta, 1982; Wolfe, 1985). However, several studies seem to indicate that attributions and other cognitions also mediate the effect of parental emotional factors on responses to their children's behavior. In a study of normal families, Dix and Reinhold (1991) found that when a general attribution factor was used as a covariate in analyses of mood and parental behavior, the effect for mood was reduced by 72% and was no longer significant. Dix et al. (1990) also found attributions to mediate between moods and parental responses. Bugenthal, Blue, & Lewis (1990) investigated abusive and nonabusive parents of clinically referred children, finding that attributions play a mediational role between parental reactivity and affective responses to their children (see also Bugenthal & Shennum, 1984).

All of this evidence taken together demonstrates that, while parental responses may depend on many factors, such as actual behavior of children, parental moods, consequences of particular decisions for the parents, and salience of information, the attributions and other cognitions parents make about their children's behavior obviously plays an extremely important role in determining their responses to this behavior.
AFFECT AS MEDIATOR OF SOCIALIZATION RESPONSES

Much of the research just reviewed has demonstrated that affect is strongly related to attributions; the same research has also found a very strong correlation between affect and socialization responses (Dix & Grusec, 1985; Dix et al., 1986; Dix et al., 1989). A study by Dix and Lochman (1990) extends the evidence somewhat further, in that affect predicted ratings of forcefulness of discipline independent of both dispositional attribution and attribution of responsibility, whereas neither dispositional attribution nor attribution of responsibility predicted ratings of forcefulness independent of affect. This evidence is certainly in keeping with a model that proposes affect as a mediator between attributions and parental responses, and although not demonstrating this sort of connection unequivocally, can be seen as tentative evidence for it in parent-child relationships.

A SUMMARY OF PARENTAL SOCIALIZATION PRACTICES

Most of the attribution theory and research just reviewed can be summarized by a social-cognition model of parenting which is represented below in Figure 2. Although different aspects of the model have been emphasized at different times, it essentially predicts that factors inherent in the parent affect attributions about his or her child,
which in turn have an effect either directly or through parental affect on the way the parent deals with the child.

Figure 2  **A social-cognitive model of parenting**

<table>
<thead>
<tr>
<th>Factors affecting attributions</th>
<th>Attributions about children</th>
<th>Parental responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inferences about child's knowledge and ability; situational pressures; etc.</td>
<td>Causal attribution (correspondent inference)</td>
<td>Parental practices (type of discipline force, etc)</td>
</tr>
<tr>
<td>Parenting beliefs, values and ideologies about parenting</td>
<td>Attribution of responsibility</td>
<td>Affect</td>
</tr>
<tr>
<td>Parental moods and emotions</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Adapted from Dix & Grusec, 1985; Dix et al, 1989; Dix & Reinhold, 1990 and Dix & Lochman, 1990.)
ATTRIBUTIONS AND SOCIALIZATION IN CONDUCT DISORDER

The material on parental attribution and socialization practices reviewed so far has obvious implications for the coercive parent-child interactions that have been observed in the families of CD children. Factors at various steps in the model (See Figure 2), especially biases and distortions in perceptions of children, could contribute to beginning and/or maintaining such dysfunctional interactions. Although this connection between parental attributions and coercive interactions seems to be predicted from the literature, only one study has investigated this link more directly. MacKinnon-Lewis and Lamb (1992) found that attributions of normal mothers and sons were significantly related to coercive interactions, with the most aggressive dyads being those in which both mother and child perceived hostile intent in the other. This study utilized no measure of child behavior problems, however, preventing a more direct link to be made with CD. Nonetheless, this finding appears to strengthen the argument that attributions may play an important role in CD through their relationship with the coercive parent-child interactions evident in these families. With this in mind, we will now turn to research that has attempted to outline some of the cognitive biases in distressed families. Since so very little has been done with a CD population, we will first review some of the research done with other clinical populations that may have relevance for CD.
Abusive Families

Like families with CD children, abusive families have often been observed to differ from normal families in their socialization practices, especially in initiating and perpetuating coercive parent-child interactions (Patterson, 1982). Abusive parents direct more aversive behaviors towards their children in the ordinary course of a day, are less effective in terminating problem behaviors in their children, have less positive interactions with other family members, have greater negative affective reactions to childrens' negative behavior, use punishment more often as means of discipline, are more likely to use severe punishment, and are less flexible in their discipline methods than nonabusive parents (Trickett & Susman, 1988; Trickett & Kuczynski, 1988; Wolfe, 1985; Vasta, 1982). The immediate antecedents of abuse are most often interactions involving noncompliance and parental discipline (Gil, 1970), a finding most significant to an attributional model.

Examinations of abusive parents' cognitions have been found to include negative perceptions of children, many of which are consistent with the distortions and biases predicted by an attributional model. For example, Golub (1984) found that abusive parents saw negative behaviors of children as generally more intentional than nonabusive parents. In addition, parental ratings of intent were related to both the
degree of anger experienced by the parent and the severity of the punishment applied. Bauer and Twentyman (1985) found that abusive mothers were much more likely than nonabusive or neglecting mothers to view their children as acting intentionally to annoy them, and responded with greater negative affect to their children's behavior; nonabusing and neglecting mothers did not significantly differ on any measure. In a study of hypothetical behaviors, Bugenthal, Blue, and Cruzcosa, (1989) found that abusive mothers attributed higher control to children and lower control to parents over caregiving failures than did non-abusive mothers. Bradley and Peters (1991) found that abusive mothers identified more problem behavior in their children and rated this behavior as much more problematic than nonabusive mothers, even though the children exhibited similar rates of externalizing behavior problems and both groups of parents rated these behaviors as equally irritating and upsetting.

In a study directly examining attributions, Larrance and Twentyman (1983) found that abusive mothers and neglectful mothers had much more negative expectations about their children's behavior than nonabusive mothers, but did not differ from each other on any measures. Abusive mothers and neglectful mothers also attributed high internality and stability to their children's failures and low internality and stability to their children's successes. The nonabusive mothers' attributions were exactly the reverse, in that they saw their children's successes as being caused by stable and
internal traits, and their failures as caused by temporary and external circumstances. Although the non-abusive mothers showed the attributional pattern of a self-serving bias that shows their child in the most positive light (c.f. Dix et al., 1986; Gelfand & Gretarsson, 1988), the abusive mothers and neglecting mothers showed a pattern of attributions that is similar to those made of a competitor or disliked person (Brown, 1986; Forsythe & Schlenker, 1977).

It has been suggested that unrealistic expectations of children's behavior may be implicated in child abuse (Steele & Pollack, 1968). An attributional view would suggest that if parents fail to take developmental limitations into account and overestimate their children's capabilities when assessing their behavior, this could lead to the negative perceptions that have been demonstrated to exist in abusive parents. Consistent with this is the finding by Azar, Robinson, Hekimian, and Cunningham (1984) that both abusive and neglectful mothers evidenced significantly greater unrealistic expectations for their children than did normal mothers, demonstrating a large deficit in knowledge about age-appropriate behavior. Although no published study has connected these unrealistic expectations and negative attributions together in an abusive population, research from normal populations suggests that the two may be related, and two unpublished studies have found this connection (Larrance, Amish, Twentyman and Plotkin, 1982; Plotkin and Twentyman, 1982).
Parents of ADHD Children

Although ADHD has been the subject of a great deal of research, including much work on family antecedents, there is a dearth of attributional and cognitively focused studies in this area. However, one study has findings with important implications for CD. Sobol et al. (1989) examined attributions of parents in relation to the compliance and noncompliance behavior of their ADHD or normal children. They found that for vignettes of particular situations, parents of ADHD children used the personality of the child as an explanation much more frequently and situational/interpersonal factors much less than did control parents. ADHD parents also saw their child's behavior as less stable or controllable than comparison parents, especially positive behaviors, and had less expectation of future compliance from their children. Thus, like abusive parents, parents of ADHD children also seem to have more negative perceptions of their children than normal parents.

Families With Depressed Parents

People suffering from depression seem to have cognitive distortions that negatively bias many of their perceptions (for a thorough review, see Williams, Watts, McLeod & Matthews, 1988; c.f. also Beck, 1967; Beck, Rush, Shaw, & Emery, 1979; Seligman, Abramson, Semmel & Von Beyer, 1979; Garber & Hollon, 1980). Of particular interest to this study is the fact that maternal depressed mood is strongly
associated with negative perceptions of children, and it is a consistently better predictor of maternal perceptions of children than actual child behaviors, even in a clinical child population (Griest, Wells, & Forehand, 1979; Brody & Forehand, 1986). Since depressed mood has been found to be higher in populations that also have demonstrated negative biases in attributions about children, such as parents of hyperactive or ADHD children (Mash & Johnson, 1983; Cunningham, Benness, & Siegel, 1988), and parents of antisocial or aggressive children (Griest and Wells, 1983; Patterson, 1982), it may play a significant role in developing and maintaining these negative perceptions of children. In addition, depressed parents in a normal population have been found to be significantly more irritable in disciplining their children than nondepressed parents, and their children are significantly more aggressive than the children of the nondepressed parents ( Forgatch, 1988 - cited in Reid and Patterson, 1989).

Although these studies support the view that distressed parents have more negative perceptions of their children than normal parents, most of them do not detail the processes that might underlie such cognitive differences, or attempt to connect them to differences in socialization behaviors. In addition, even though these populations likely overlap with CD, as mentioned earlier, none of their defining characteristics are necessarily included in the definition of CD. For instance, many parents of CD children are not
abusive, while, conversely, many children of abusive parents do not show evidence of CD behavior.

PARENTAL ATTRIBUTIONS IN CONDUCT DISORDER

Only three studies have investigated parental attributions for children's behaviors in populations of antisocial or aggressive children. Compas, Friedland-Bandes, Bastien, & Adelman, (1981: Study 2) used questionnaires to compare parent and child attributions for children's actual behaviors in families referred for child behavior problems. They found that both parents and children had a greater tendency to cite causes for success that were internal to, rather than external to the child; however, parents made significantly more internal attributions for problems than children did. In another study using interview material, Compas, Adelman, Greundl, Nelson, & Taylor, (1982) replicated the above result. This attributional pattern is consistent with expectations for unempathic observers in the adult literature, and seems to be similar to that found in other clinical populations (c.f. Larrance & Twentyman, 1983; Sobol et al., 1989). However, since parents' attributions were not compared with a control group in this study, no definite conclusions can be made. In addition, the target population was mixed, defined as only children with "learning and/or behavior problems" (Compas et al., 1982: p. 79), included boys and girls, and covered a huge age range (7 to 16 years old).
Dix and Lochman (1990) compared mothers of aggressive boys undergoing treatment for behavioral problems with mothers of nonaggressive boys on various attribution and response measures. Although not specified, it would seem these children would most likely meet the criteria for CD since their mean score for aggressiveness on a behavior checklist was 1 1/2 standard deviations above the mean for a normal male sample. Mothers watched videotapes of staged parent-child interactions which involved a mother's requests for compliance being met with noncompliance on the part of the child. Results showed that mothers of aggressive boys made higher ratings of intent and disposition for the children's behaviors, and also reported being more upset than mothers of nonaggressive boys. These findings are the first to demonstrate that parents of antisocial boys make more negative attributions about and respond with greater negative affect to children's misbehavior than controls. However, the results must be viewed with caution as they were based on quite a small sample (i.e. 15 in the clinical group, reduced to 12 for some analyses), covered a rather large age range of children (9 - 16), and used groups which may have exaggerated differences because they were selected to be particularly high and low in aggressiveness.

Although the potential importance of attributions in CD is supported by the above studies, more research is needed to before any firm conclusions can be drawn. In addition, the details of how these constructs relate to each other need to
be deliniated. The purpose of the current study was to further investigate this relationship between mothers' attributions and parenting responses, and their sons' antisocial behavior. It was a partial replication of the Dix and Lochman (1990) study which altered and expanded it in various ways. First, a more precise operational definition of CD and ODD based on the DSM-III-R (American Psychiatric Association, 1987) diagnostic criteria was used. Second, the age range of the children was limited to 8-13 year olds, in order to restrict the possibly confounding effect that age may have on parental attributions. Third, a larger sample of attributional and parenting response measures was utilized, with the hope of capturing more detail in parents' cognitions and behaviors. Fourth, both positive (compliance) and negative (noncompliance) behaviors were investigated, something only previously done with normal and ADHD populations. And fifth, several parent characteristics were assessed with the goal of linking these to attributional, emotional and parenting responses.
A NOTE ABOUT SEX DIFFERENCES

Mothers have been chosen as subjects because most of the previous research on which this study is based have investigated the cognitions and behaviors of mothers. In addition, mothers are usually more involved than fathers in the socialization of the child, more often get custody of children in split families, and are easier to get as subjects (Dix et al., 1986). Since males represent the vast majority of CD children (American Psychiatric Association, 1987), mothers of boys will be used in this study. Of course, these decisions preclude any investigation of parent or child sex differences, necessitating a review of the literature in order to place this study in the proper context.

ATTRIBUTIONS AND PERCEPTIONS

Much of the parental attribution research conducted up to this point has not investigated either child or parent sex differences. Mothers have most often been used as subjects, and when fathers have been included, they have not usually been analyzed separately. Only one attribution study in a normal population has investigated parental sex differences, finding no significant effects on any variables (Dix et al., 1986). However, a study of parents from a clinical population (ADHD children) found significant differences, with mothers rating noncompliance of children as more external and as more
unstable than fathers (Sobol et al., 1989). Other cognitive processes, such as perceptions of child deviance, have also been found to differ between clinical parents, with mothers rating children as more problematic than fathers (Mash & Johnson, 1983; Cunningham et al., 1989). Sex of child has also not been investigated a great deal, with only two attribution studies utilizing it as a variable. Dix et al (1988) obtained no significant child sex effects, while Gelfand and Gretarsson (1988) found that both positive and negative behavior of girls was rated as more internal than that of boys. Taken together, these findings indicate that while there might be some predictable parent sex effects, with mothers tending to view their problem children somewhat more negatively than fathers, there are no clear expectations of any child sex differences.

SOCIALIZATION RESPONSES AND BEHAVIOR

In a normal population, the results on parent sex effects in relation to parental socialization practices and beliefs is mixed: some studies have found no differences at all (Dix et al., 1989: Study 2; Grusec and Kuczinski, 1980), while others did find differences on some variables but not others (Dix et al., 1989: Study 1). However, all the significant effects were in the form of complicated three-way interactions that did not necessarily have any clear or pertinent explanation. In clinical populations, the results have been somewhat more
decipherable. Mothers of antisocial children have been found to show a much higher rate of coercive behaviors towards their children than fathers (Reid & Patterson, 1989), while abusive mothers have demonstrated a significantly greater belief in spanking than abusive fathers (Trickett & Susman, 1988). Child sex differences in socialization practices, such as use of different methods and force, have also been found in normal (Grusec et al., 1982) and abusive populations (Trickett & Kuczinski, 1986). However, a recent meta-analysis of socialization studies shows that there is no significant difference in parents' responses to the aggressive and antisocial behavior of boys and girls (Lytton & Romney, 1990). Thus, similar to the attributional findings, some parental sex differences have emerged, with mothers tending to be more negative in socialization interactions with their children than fathers, while child sex effects have been found to be marginal or nonexistent.

**SUMMARY**

The dearth of good studies investigating sex differences in the area of parental attributions and cognitions indicates that much more research is needed before any conclusions can be reached. Since few studies have looked at parental attributions in a CD or antisocial population, other variables must receive priority before sex differences are investigated. However, future research looking at attributions and
socialization responses by both fathers and mothers of both boys and girls would dispel much of the confusion, and help to clarify what is now an inconclusive and murky area.
HYPOTHESES

The literature on attributions in normal and clinical populations reviewed earlier would lead us to expect predictable relationships between antisocial behaviors and attributions: parents with children exhibiting more antisocial behaviors would be expected to have more of a negative bias towards children (Larrance & Twentyman, 1983; Dix & Lochman, 1990), while parents with children scoring lower on antisocial behaviors would be expected to have more of a positive bias (Dix et al., 1986; Gretarsson & Gelfand, 1988). More specifically, mothers who rate their children higher on CD or ODD behaviors are predicted to attribute higher internality, control, intent, stability, responsibility, and lower externality to children's negative behaviors, while attributing lower internality, control, intent, stability, responsibility and higher externality to positive behaviors than mothers rating their children lower on CD or ODD behaviors. (Hypothesis 1).

A relationship between antisocial behaviors and emotional responses is also expected: parents of children exhibiting more antisocial behaviors should display more negative affect to children's negative behavior and less positive affect to children's positive behavior than parents of children displaying fewer antisocial behaviors (Dix & Lochman, 1990; Bauer & Twentyman, 1985). Specifically, mothers rating their children higher on CD or ODD symptoms are predicted to give
higher responses of negative affect to negative behaviors and lower responses of positive affect to positive behaviors than mothers rating their children lower on CD or ODD symptoms. (Hypothesis 2).

Antisocial behaviors and parenting responses are also expected to be related, with parents of children scoring higher on antisocial measures believing it to be less important to respond to either positive or negative behaviors (Dix et al., 1986; Patterson, 1982), thereby de-emphasizing consistency in responses (Reid & Patterson, 1989; Patterson, 1982), and suggesting stronger disciplinary responses and less intense rewarding responses (Dix & Lochman, 1980; Trickett & Kuczinski, 1986) than parents of children exhibiting less antisocial behaviors. Specifically, mothers scoring their children higher on CD or ODD symptoms are predicted to give higher ratings of force for disciplinary responses and lower ratings of importance and consistency of responses to children's negative behaviors, as well as lower ratings of intensity of rewarding responses, importance of responses and consistency of responses to positive behaviors, than mothers scoring their children lower on CD or ODD symptoms (Hypothesis 3).

Individual difference measures that may be related to CD/ODD symptoms and also to attributions and responses include authoritarian childrearing ideology, emotional reactivity (expression of anger), and depressed mood. Although some of these variables are thought to be associated, the exact nature
of the relationships is not clear; in addition, their differing impact on attributions and parenting responses have not been tested.

1. As seen earlier, authoritarianism has been found to be linked to negative attributions and to greater negative affect and use of force in a normal parent population (Dix et al., 1989; Dix & Reinhold, 1991). However, no study has examined whether authoritarianism in parents is related to behavior problems in their children, and whether the trait is related to attributions and responses in this population. Thus, mothers rating their children higher on CD or ODD symptoms are predicted to score higher on authoritarian childrearing values than mothers rating their children lower on CD or ODD symptoms (Hypothesis 4), and authoritarianism is predicted to be associated with attributions (Hypothesis 5), emotional responses (Hypothesis 6) and parenting responses (Hypothesis 7).

2. Angry moods have been shown to produce more negative attributions of children's aversive behavior, greater upset in response to these behaviors, and stronger disapproval of these behaviors in a normal population (Dix & Reinhold, 1991; Dix et al., 1990). Abusive parents have been found to be much more emotionally reactive to children's behavior and also to make more negative attributions about children than nonabusive parents (Bauer & Twentyman, 1985; Larrance & Twentyman, 1983). If a parent has a predisposition to being angry in a variety of situations, possibly they would be in an angry mood more
often, with the resulting negative bias that has been observed in parents of aggressive and antisocial children (c.f. Dix & Lochman, 1990). Therefore, mothers rating their children higher on CD or ODD behaviors are predicted to score higher on a measure of general expression of anger than mothers rating their children lower on CD or ODD symptoms (Hypothesis 8), and anger is predicted to be associated with attributions (Hypothesis 9), emotional responses (Hypothesis 10) and parenting responses (Hypothesis 11).

3. It has been shown that depression has been associated with negative perceptions, including parental perceptions of referred clinic children (Beck et al., 1979; Griest et al., 1979). Parents of antisocial children have been found to be more depressed than parents of normal children (Patterson, 1982). However, no study has yet delineated the details of these negative perceptions, or investigated the relationship between antisocial behaviors, depressed mood, attributions and emotional/parenting responses. Mothers rating their children higher on CD or ODD symptoms are predicted to exhibit a more depressed mood than mothers rating their children lower on CD or ODD behaviors (Hypothesis 12), and depressed mood is predicted to be linked to attributions (Hypothesis 13), and to emotional responses (Hypothesis 14) and parenting responses (Hypothesis 15).

These individual difference constructs could be accounting for differences between groups and affecting attributions and responses in various ways. For instance, any
effects found for anger could potentially be accounted for by depressed mood, as this construct is strongly associated with depression (Riley & Treiber, 1989; Biaggio & Godwin, 1987; Biaggio, Supplee & Curtis, 1981). Authoritarian ideology could be acting through anger as well, for hostility and aggression are often elevated in authoritarian individuals (Adorno, Frenkl-Brunswick, Levison, & Sanford, 1950; Ray, 1980). However, each of these constructs may also have other links to attributions and responses. Depression could bias attributions through a general negatively-biased cognitive set that may not be mood-dependant (Beck et al., 1979). Authoritarianism probably also affects attributions through very high or unrealistic expectations of children (c.f. Dix et al., 1989). And a predisposition to anger could certainly be stemming from factors other than depressed mood, such as general emotional reactivity or a hostile and aggressive interpersonal style. Unfortunately, it was not possible to examine more closely the inter-relationships between these variables, as will be seen below.
The sample consisted of 50 mothers of boys aged 8 - 13 years old, who were recruited through various family and child service resources in the Lower Mainland, including government mental health centers, private therapy clinics, parent resource or education centers, Big Brothers of B.C., parent support groups, and churches. (See Appendix G for details.) Clinical subjects proved to be extremely difficult to obtain. After 18 months of recruiting and despite a large network of contacts, only 14 subjects met the criterion for inclusion in the clinical group.

A checklist of symptoms for CD and ODD taken from the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R: APA, 1987) was completed by the mothers and used to determine the extent of their sons' behavior problems. Scores on this new measure (DSM-CL: c.f. Appendix E) ranged from 0 - 12 symptoms. The validity of the DSM-CL was checked by comparison to scores on the Externalizing subscale of the Child Behavior Checklist (CBCL: Achenbach and Edelbrock, 1981 - c.f. Appendix F), a well-established, valid and reliable measure of behavior problems in children. A significant correlation was found between the DSM-CL and the CBCL-E (r=.69; p<.0001). Using the DSM-III-R criteria for ODD and CD, only 14 subjects' ratings of their children were found to
meet these clinical criteria: 2 CD and 12 ODD. Since the clinical group was this small, and it has been shown that dichotomization of data leads to further losses of power up to 66% (Cohen, 1983), it was decided that the most efficient way to analyze the data was to treat the DSM-CL scores as a continuous variable and to utilize correlations to examine relationships with the dependent variables.

Another checklist, based on the ADHD symptoms from the DSM-III-R (ADHD-CL: c.f. Appendix E), was also completed by the mothers. Scores on this measure ranged from 0 - 12. The original intent of this task was to identify and exclude those boys who might have an ADHD diagnosis. However, since it was very difficult to get an unadulterated CD profile, mothers of boys who reached the DSM-III-R ADHD criteria on their ADHD-CL scores were included. (Of the 9 subjects whose children met these criteria, 2 also had children who met the criteria for ODD.) ADHD symptoms showed a significant relationship to DSM-CL scores (r=.39; p < .01).

Analyses were also conducted on the variables of age and education of mother, mother's marital status, race of mother, family income, number of children, and age of target child to determine whether there were any relationships with CD or ODD behavior which could potentially confound the results of the study. As can be seen from Table 1, none of these variables were significantly related to DSM-CL scores.
### Table 1

Demographic variables and their relationship to DSM-CL scores

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>r</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother's age</td>
<td>38.86</td>
<td>.12</td>
<td>p &gt; .10</td>
</tr>
<tr>
<td>Education of mother (years)</td>
<td>13.02</td>
<td>.06</td>
<td>p &gt; .10</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(married-commonlaw/single)</td>
<td>26/24</td>
<td>.14</td>
<td>p &gt; .10</td>
</tr>
<tr>
<td>Race (Oriental/White)</td>
<td>1/49</td>
<td>---</td>
<td>----</td>
</tr>
<tr>
<td>Family income (nearest $100)</td>
<td>$40,100</td>
<td>.05</td>
<td>p &gt; .10</td>
</tr>
<tr>
<td>Number of children</td>
<td>2.34</td>
<td>.15</td>
<td>p &gt; .10</td>
</tr>
<tr>
<td>Age of target child</td>
<td>10.64</td>
<td>.23</td>
<td>p &gt; .09</td>
</tr>
</tbody>
</table>

**QUESTIONNAIRES**

**Attribution/Socialization Questionnaire (ASQ: c.f. Appendix A)**

**Stimulus Behaviors** Subjects read vignettes of boys engaging in three positive and three negative behaviors, and made ratings on various attributional and socialization dimensions. Since most parental problems with difficult children seem to involve interactions around compliance or noncompliance of everyday situations, the vignettes were chosen to represent these sorts of interchanges (c.f. Sobol et al., 1989). The boys in the descriptions were represented as being "somewhere between the ages of 8 to 13 years old".

(Example - Noncompliance: "John was watching T.V. in the living room, when his mom came in and let him know it was time
for bed. He ignored her and kept on watching his show, even though she reminded him again.

Response ratings. After each of the six descriptions of behavior, subjects made attribution and parenting response ratings on eight-point Likert scales, as well as completing two open-ended responses. (Since the scale is bipolar, making an "undecided" middle rating more likely, an even number of choices was selected to turn it into a forced choice situation.)

Attributional dimensions included: 1) internal - "caused by the child's personality or character" (not at all/completely), 2) external - "caused by the situation or circumstance" (not at all/completely), 3) control - "control over this behavior" (no control at all/complete control), 4) stability - "stay the same over time" (never the same/always the same), 5) intent - "intentional or on purpose" (not at all intentional/completely intentional), 6) globality - "the same in different situations" (never the same/always the same) and 7) responsibility - "responsible...for this behavior" (not at all responsible/completely responsible). (Attribution of locus (i.e. internal vs. external) is conceptualized in this study as two separate dimensions, since data from attributional studies do not support a hydraulic model (Bradbury & Fincham, 1987; Taylor & Kouvetaki, 1976). It appears that subjects do not tend to respond as if they view internal and external as two opposite poles on the same dimension, but instead provide seemingly inconsistent
responses. For instance, it is common for behaviors to be rated as highly internal and highly external at the same time, a pattern of responding not compatible with a hydraulic conceptualization of this attributional dimension.)

An emotional response variable (affect) read as follows: "How does the parent feel about this behavior?" (extremely upset/extremely pleased).

Parenting response variables included: 1) importance of response - "How important is it...to do something about this behavior?" (not at all important/extremely important), 2) consistency of response - "How similar should the parent's response be...if it happens again?" (not at all the same/exactly the same), and 3) forcefulness of response - "How strong should the parent's reward or punishment be?" (mild reward/strong reward or mild punishment/strong punishment).

Parents also answered the following open-ended questions: "Why did the child do this?" and "What should the parent do about this behavior?". These responses were included chiefly to be used as a check on the ratings, and were not analyzed for this study.

Alpha coefficients, which indicate reliability, were computed for the three compliance and three noncompliance vignettes on each of the dependent variables: average alpha (noncompliance) = .68; average alpha (compliance) = .71 (c.f. Table 2). These coefficients suggest that responses to the vignettes are similar enough to each other to justify
combining them into composite scores. Thus, responses to the three vignettes for each category (noncompliance or compliance) were combined to form two single scores for each dependent variable. These aggregate scores represent the subjects' responses to vignettes of positive (compliance) and negative (noncompliance) child behaviors on the various attribution, emotional, and parenting response variables.

Table 2

Alpha coefficients for combining vignettes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Behavior category</th>
<th>Noncompliance</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td></td>
<td>.88</td>
<td>.77</td>
</tr>
<tr>
<td>External</td>
<td></td>
<td>.54</td>
<td>.58</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>.83</td>
<td>.75</td>
</tr>
<tr>
<td>Stable</td>
<td></td>
<td>.79</td>
<td>.76</td>
</tr>
<tr>
<td>Intent</td>
<td></td>
<td>.43</td>
<td>.72</td>
</tr>
<tr>
<td>Global</td>
<td></td>
<td>.69</td>
<td>.85</td>
</tr>
<tr>
<td>Responsible</td>
<td></td>
<td>.82</td>
<td>.59</td>
</tr>
<tr>
<td>Affect</td>
<td></td>
<td>.50</td>
<td>.73</td>
</tr>
<tr>
<td>Importance of response</td>
<td></td>
<td>.53</td>
<td>.75</td>
</tr>
<tr>
<td>Consistency of response</td>
<td></td>
<td>.79</td>
<td>.57</td>
</tr>
</tbody>
</table>
Similarity Questions  At the end of the questionnaire, each of the mothers was asked four questions which related her responses to the hypothetical vignettes to her own child.

1. How much did you think of your own 8-13 year old boy when you completed these questions?

2. How similar are your answers in this questionnaire to those you would give about your own 8-13 year old boy?

3. To what extent does your 8-13 year old boy act the same as the children in the stories?
   a) For positive behaviors - where the boy does what his mother wants.
   b) For negative behaviors - where the boy does not do what his mother wants.

The mothers indicated their responses on a four-point scale ranging from 1 (Not at all) to 4 (Exactly the same). These questions were included to assess the ecological validity of the ASQ, as well as to determine the relationship between DSM-CL scores and the extent to which mothers imposed their own children into the hypothetical vignettes.

Authoritarian Ideology (c.f. Appendix B)

The control subscale of the Childrearing Practices Report (CPR: Block, 1965) measures the degree to which parents believe in various authoritarian parenting practices, such as strict rules, use of physical punishment, and scolding or criticizing children. This subscale is made up of eight items6 rated by subject which are averaged to form a single
score (c.f. Dix & Reinhold, 1991). Although there is no reliability data on the subscale when it is used separately from the entire scale, there is considerable evidence for the reliability and validity of the complete scale; in addition, there is evidence that when these specific items are administered as part of the complete questionnaire, they show good reliability and stability (Block, 1965; Roberts, Block, & Block, 1985). In addition, the subscale used alone predicts mothers' preference for power-assertive discipline, greater upset with children's negative behavior, higher expectations of children, and attributions of greater intent and responsibility (Dix et al., 1989; Dix & Reinhold, 1991).

Anger (c.f. Appendix C)

The Anger Self-Report (ASR: Zelin, Adler, & Myerson, 1972) is a Likert-type questionnaire which yields scores for various aspects of anger. The General Expression subscale is designed to yield a score which reflects an individual's general tendency to express anger. This subscale has been shown to have moderate test-retest reliability (Biaggio, 1981) and good split-half reliability (Zelin et al., 1972). There is also evidence for good concurrent, discriminant and predictive validity of the subscale (Biaggio, 1980, 1981; Zelin et al., 1972).
Depressed Mood (c.f. Appendix D)

The Center for Epidemiology Studies Depression Scale (CES-D Scale: Radloff, 1977) was developed for use in studies of depressive symptoms in the general population, making it more applicable to non-clinically depressed groups than the Beck Depression Inventory (Beck et al., 1979). It is designed to measure current levels of depression, with an emphasis on depressed mood, and yields a total score reflecting severity of depression. The scale has been shown to have very high internal consistency and moderate test-retest reliability, as well as demonstrating very good concurrent and adequate predictive validity (Radloff, 1977; Brown & Pacini, 1989).

PROCEDURE

A description letter (c.f. Appendix H) was distributed to mothers of 8 - 13 year old boys by the participating organizations. Mothers who responded were mailed questionnaires which were completed at home and returned by mail. The order of the three individual differences questionnaires (CES-D, ASR, CPR) was completely randomized, as was their assignment as a block to a position preceding or following the ASQ. Six different versions of the ASQ were given in random order. The DSM-CL/ADHD-CL and CBCL-E were completed by all subjects at the end of the procedure, after all other questionnaires, in order to prevent mothers' responses to the hypothetical vignettes from being unduly biased by a focus on their own child.
RESULTS

ATTRIBUTION/SOCIALIZATION QUESTIONNAIRE (ASQ)

Similarity Questions

Answers to the question regarding how much the mothers thought of their own child while responding to the vignettes indicated that all the mothers had their own child in mind a great deal while completing the ASQ (Mean = 3.04). DSM-CL scores did not correlate significantly with responses to this question (r = -.04, p > .10). Responses to the question about similarity of ASQ ratings to ratings they would give for their own child indicated that all mothers would have responded quite similarly for their own sons (Mean = 3.23). DSM-CL scores also did not correlate significantly with responses to this question (r = .14, p > .10). Answers to the third and fourth questions reveal an interesting pattern in that mothers giving lower DSM-CL ratings thought of their children as significantly more similar to the children in the positive behavior vignettes than did mothers giving higher DSM-CL ratings (r = -.46, p < .001), while mothers giving higher DSM-CL ratings viewed their children as significantly more similar to the children in the negative behavior vignettes than did mothers with lower DSM-CL scores (r = .50, p < .0005).

These results seem to support the ecological validity of the ASQ, since mothers acknowledged the similarity of the vignettes to situations with their own children, and also
answered Questions 3 and 4 consistently with what would be expected from their CBCL-E and DSM-CL scores. This response style was not at the expense of other types of validity, however, since the mothers' DSM-CL ratings were not related at all to their responses to Question 1 (the extent to which they thought of their child when completing the ASQ) and Question 2 (the similarity of their responses to those they would have made rating their own child).

Attributions

Since the number of attribution variables was large in comparison to the number of subjects, it was decided to combine the scores to form a smaller number of aggregate variables. It was thought that since the internality, control, responsibility and intent variables are all involved in parental projection of blame on children in clinical populations, they would combine naturally into one aggregate variable. Stability and globality, both concerned with generalization to other situations and times, were thought to form another grouped variable, leaving external as a third variable. Alpha coefficients revealed that these combinations were indeed justified (c.f. Table 3). Thus, scores on internal, control, responsibility and intent were combined for noncompliance and for compliance, forming two single scores. These aggregate scores represent the subjects' responses to vignettes of positive and negative children's behaviors on the
"blaming" variable. The same procedure was followed to combine scores for global and stable into two aggregate scores.

Table 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>Behavior category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Noncompliance</td>
</tr>
<tr>
<td>&quot;Blaming&quot;</td>
<td>.71</td>
</tr>
<tr>
<td>(Internal, control, responsibility and intent)</td>
<td></td>
</tr>
<tr>
<td>&quot;Generalization&quot;</td>
<td>.89</td>
</tr>
<tr>
<td>(Stable and global)</td>
<td></td>
</tr>
</tbody>
</table>

on a new "generalization" variable.

Correlations between DSM-CL scores and scores on the three attribution variables were performed, utilizing both total scores (noncompliance + compliance) and difference scores (noncompliance - compliance). Correlations relating to these two scores represent the main effects of and interactions between the two independent variables (DSM-CL and noncompliance/compliance). As can be seen from Table 4, none of the correlations reached significance, although there were trends for the "generalization" variable (total scores) (r = .29, p < .05); and the "blaming" variable (difference scores) (r = .31, p < .03). (Bonferroni corrections were performed in each case, with the critical p-value set at .0167.)
Table 4
Correlations between DSM-CL scores and ASQ responses

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total scores</th>
<th>Difference scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Blaming&quot;</td>
<td>.24</td>
<td>.31</td>
</tr>
<tr>
<td>&quot;Generalization&quot;</td>
<td>.29</td>
<td>.09</td>
</tr>
<tr>
<td>External</td>
<td>-.16</td>
<td>-.06</td>
</tr>
<tr>
<td>Affect</td>
<td>-.14</td>
<td>-.24</td>
</tr>
<tr>
<td>Importance of response</td>
<td>-.03</td>
<td>.18</td>
</tr>
<tr>
<td>Consistency of response</td>
<td>-.04</td>
<td>-.04</td>
</tr>
</tbody>
</table>

Emotional Responses

Correlations between DSM-CL scores and scores on the affect variable were performed, again utilizing both total scores (noncompliance + compliance) and difference scores (noncompliance - compliance). As can be seen from Table 4, neither of these correlations reached significance.

Parenting Responses

Correlations between DSM-CL scores and scores on the variables of importance of response and consistency of response were performed, again utilizing both total scores (noncompliance + compliance) and difference scores (noncompliance - compliance). As can be seen from Table 4, none of these correlations reached significance. (Bonfereoni
corrections were performed in each case, with the critical p-value set at .025.)

INDIVIDUAL DIFFERENCES MEASURES

Depressed Mood

Examination of the correlation between DSM-CL scores and CES-D scores revealed a significant relationship \( (r = .33, p < .02) \). This finding indicates that mothers who rated their children higher on the DSM-CL symptoms also exhibited greater depressed mood than mothers who rated their children lower on the DSM-CL. Depressed mood was not significantly related to any of the attribution, emotional response or parenting response scores.

Anger

The correlation between DSM-CL scores and scores on the General Expression subscale of the ASR revealed no significant relationship \( (r = -.10, p > .10) \). Anger was not significantly related to any of the attribution, emotional response or parenting response ratings, although a trend towards significance was evidenced in the relationship to the "generalization" variable (difference scores) \( (r = .31, p < .03) \). Comparison to ASR means from another study (Biaggio, 1980) indicate that the mean from the present study \( (M = 29.23) \) was somewhat lower than the normative mean from Biaggio's study \( (M = 36.61) \).
Authoritarianism

The correlation between DSM-CL scores and scores on the control subscale of the CPR revealed no significant relationship. Authoritarianism was significantly correlated with the "blaming" variable (total score) \( (r = .39, p < .01) \), and showed a trend towards significance in the relationship with importance of responding (difference score) \( (r = .32, p < .03) \). Authoritarianism was not

Table 5

Relationships between personality measures and other DV's

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<thead>
<tr>
<th></th>
<th>Depress. Mood</th>
<th>Anger</th>
<th>Authoritarianism</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Diff</td>
<td>Total</td>
</tr>
<tr>
<td>&quot;Blaming&quot;</td>
<td>.13</td>
<td>.07</td>
<td>-.15</td>
</tr>
<tr>
<td>&quot;Generalization&quot;</td>
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<td>-.04</td>
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<tr>
<td>External</td>
<td>-.08</td>
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<td>.11</td>
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<td>Affect</td>
<td>-.04</td>
<td>.01</td>
<td>-.18</td>
</tr>
<tr>
<td>Importance</td>
<td>-.06</td>
<td>.18</td>
<td>-.14</td>
</tr>
<tr>
<td>of response</td>
<td>-.08</td>
<td>.12</td>
<td>.13</td>
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</table>

Total = Total scores  Diff = Difference scores

significantly related to any of the other attribution, emotional response or parenting response scores. (Since few
relationships were found between these individual differences measures, ASQ scores, and the DSM-CL scores, no further analyses on these relationships were conducted.

RESULTS SUMMARY

In summary, none of the major hypotheses attempting to replicate previous research on the relationship between attributional/emotional/parenting responses and CD/ODD (Hypotheses 1 to 3) were supported, although there were two trends in the expected direction. Only one major hypothesis, a relationship between depressed mood and CD/ODD (Hypothesis 12), was supported. In addition, one of the predicted relationships between depressed mood, authoritarianism and anger and the attributional/emotional/parenting responses (Hypothesis 5 - authoritarianism and "blaming") was significant.
DISCUSSION

Although two previous studies of families with CD children have found that the parents have a negatively biased view of their children when compared to normal families (Dix & Lochman, 1990; Baden & Howe, 1992), this study failed to replicate those findings to any great extent. As well, the present study did not support many of the predictions that were made from the research on parental attributions and parenting behavior in other types of distressed families (e.g. ADHD children, abusive parents, depressed parents) and in nondistressed families. Contrary to expectations, mothers' ratings of their children's antisocial behavior were not significantly related to any attribution variables, although there were two trends towards significance: mothers with higher DSM-CL scores seemed to generalize children's behavior more to other times and situations, and tended towards more blaming for negative behaviors and giving less credit for positive behaviors, than did parents with lower DSM-CL scores. Emotional and parenting responses were not significantly related to DSM-CL scores.

Maternal depressed mood was significantly related to children's antisocial behavior, as expected, but neither anger nor authoritarianism showed a significant relationship to DSM-CL scores. Authoritarian parenting attitudes were significantly related to the "blaming" variable, which was also expected, given the rigid and hostile nature of
individuals scoring high on the authoritarianism construct. However, neither depressed mood or anger were significantly related to any of the attributional, emotional or parenting response measures.

There are several possible explanations for the discrepancy between most of the present results and those of previous studies. First, the methodology of this study must be considered in comparison to previous research. For instance, it may be that there was too little power to obtain effects because of the moderate number of subjects. However, the number of subjects in the present study is comparable to other studies with clinical populations which have obtained significant effects. (For example, Dix & Lochman (1990) had a sample size of 47, with 16 subjects in the clinical group.) Another possible problem may relate to the research instruments used, particularly the new ones designed for this study. However, the DSM-CL was adapted from a reliable instrument, and correlated highly with a well-validated behavior checklist for children. The ASQ was based on previous research with both normal and clinical populations, and the form and content of the vignettes was very similar to clinical studies which found positive results. It is extremely unlikely that the slight modifications made would have weakened the validity to any great extent, particularly since the methodology of previous studies differed as much from each other as from this study.
A second factor which may have contributed to the nonsignificant findings in the present study is the population of children used to select mothers for the study. For instance, a possible problem could be the age of the subjects, since many previous clinical studies in this domain used adolescents ranging up to 18 years in age. Perhaps with younger children, parents lack sufficient negative interaction with their children to have formed negative biases in cognition. Although this is plausible, it seems to be at odds with findings from longitudinal studies that pre-existing negative cognitive biases may be carried into the parent-child relationship by the parent (Moss and Jones, 1977). In addition, negative biases in parents of ADHD children as young as 5-7 years old have been found (c.f. Sobol et al, 1989). Unless the interactions with ADHD children from a very early age are significantly different than interactions with nonADHD conduct-disordered children, which is unlikely, it would appear that younger age of the subjects' children can also be ruled out as a factor in this case. Another possibility may be that there simply was not enough variance in DSM-CL scores to produce the expected effect, since the majority of "clinical" children only met ODD, and not CD criteria. It may be that the expected effects can only be found with more extreme groups, as indicated by previous studies which used populations with apparently greater behavior problems (Compas et al., 1981; 1982; Dix and Lochman, 1990; Baden & Howe, 1992)
or artificially lowered nonclinical group scores by using a second cutoff (Dix & Lochman, 1990).

A third possible contributor to the insignificant and unusual pattern of results may be the subjects themselves, since few of the mothers, including those with children with antisocial children, had their children in treatment at the time of the study. Instead, most of the mothers were utilizing other resources such as parent support groups, Big Brothers, and parenting programs. Since research has shown that parental attitudes can be a better predictor of clinic referral than actual child behavior (Lobitz and Johnson, 1975; Griest, Wells & Forehand, 1979; Griest, Forehand, Wells & McMahon, 1980), the lack of significance in this study may be due to the fact that even the parents of disturbed children in this sample have more positive perceptions of and reactions to their children than the parents with clinic-referred children who have been utilized in all previous research.

At first glance, none of this seems to make sense in the light of the significant relationship between DSM-CL scores and depressed mood. However, one must not overlook the fact that, although depressed mood was significantly related to antisocial behaviors, the mean for this sample (M = 12.62) is well below the established clinical cutoff for the CES-D (16.00) and the mean of a psychiatric population sample (M = 24.42) (Radloff, 1977). (This remains true even when the mean for the upper half of the DSM-CL scores (M = 14.92) and for those subjects whose children met the DSM-CL criteria for
ODD or CD ($M = 14.64$) are utilized.) In addition, the CES-D scale was designed for use with the general population, and would therefore be more likely to identify less severe forms of depression than clinical instruments, such as the Beck Depression Inventory (Beck et al., 1961), used in previous studies. Thus, although depression has been clearly linked with negative attitudes and perceptions (Williams et al., 1988; Seligman et al., 1979; Beck, 1967), as well as stronger negative emotional and parenting reactions (Forgatch, 1988 - cited in Reid & Patterson, 1989), it is likely that the levels of depressed mood exhibited by the subjects in this sample were not sufficient to be related to parental perceptions and behaviors or to antisocial behavior in children.

These results, therefore, do not rule out the possible importance of maternal depressed mood in child antisocial behavior, particularly in uniting many of the findings of previous studies done with CD and other clinical populations. Since depressed mood has been found to be higher in parents of children with behavior problems (Griest and Wells, 1983; Patterson, 1982), it may certainly account for, or at least be related to many of the characteristics of this group. Already mentioned earlier is the connection between maternal depressed mood and negative biases in perception and attitudes, something at least two studies have found characterizing parents of CD children (Dix & Lochman, 1990; Baden & Howe, 1992). However, since depressed mood tends to make individuals inward-turning and preoccupied with their own
needs, it may also be that these negative attributions stem from the parents viewing their children as competitors for attention and emotional support in a seemingly negative and hostile world (Larrance & Twentyman, 1983). Not only do parents of CD children tend to take a blaming stance toward their children, but they also seem to feel rather ineffectual as parents, indicating a rather helpless stance as well (Baden & Howe, 1992; c.f. also Sobol et al., 1988). This helplessness appears to be closely related to an attributional style that has been strongly associated with depression (Seligman et al., 1979; Garber & Hollon, 1980). In a similar vein, low self-esteem is another construct that is associated with both behavior problems (Mash & Johnson, 1983; Patterson, 1982) and depression (Griest et al., 1979).

Angry mood has been linked to parents' negative expectations of children, negative attributions about children's behavior, stronger negative affective reactions to misbehavior and use of more force in parenting responses (Dix et al., 1990). It is also strongly associated with depression (APA, 1987; Riley & Treiber, 1989; Biaggio & Godwin, 1987), and has been shown to express itself in parenting interactions of depressed individuals to a much greater extent than for non-depressed parents (Forgatch, 1988 - cited in Reid & Patterson, 1989). It may be this anger component of depressed mood that accounts for the hypersensitivity to child misbehaviors that has been found in clinical parent populations (c.f. Dix & Lochman, 1990; Bradley & Peters, 1991;
Bauer & Twentyman, 1983). In addition, research has shown that depressed individuals tend to pay more attention to negative stimuli and less attention to positive stimuli than nondepressed individuals (Williams et al., 1988). This finding closely parallels the tendency of parents of conduct-disordered children to notice significantly less positive behavior and somewhat more negative behavior in their children (Lorber, Reid & Simard, 1979 - cited in Wahler & Sansbury, 1990; Hollerman, Littman, Freund, & Schmaling, 1982).

It is not difficult to see how parental depressed mood could be playing an important role in coercive parent-child interactions through various cognitive and affective pathways, including attributions. Many of the characteristics of these interactions - escalating parent and child aggressive behaviors, inconsistent parental behaviors vacillating between ineffective responses or withdrawing to overly harsh punishment, parental difficulty in labelling behavior as deviant or nondeviant, ineffectual monitoring of child, a lack of effective problem-solving, reacting in an irritated or nagging manner, and a lack of warm or pleasurable interactions - may be in some way explained by characteristics of depressed individuals. For instance, a prevailing cognitive bias to overattend to negative behaviors and underattend to positive behaviors make the child seem to be more problematic than they really are, potentially increasing both perceived stress and negative affect. In addition, parental preoccupation with their own problems may result in inadequate monitoring of the
child, which leads to further misbehavior. Negative and blaming attitudes on the part of the parent increase negative affective responses to even "normal" child misbehavior, as well as eliciting an aggressive response from the child, thus increasing the likelihood of escalating the coercive interaction. Slowed thinking and indecisiveness preclude effective problem solving, and lead to the same limited repertoire of ineffective parenting interventions. Irritable mood also contributes to negative affective reactions and cognitive patterns, as well as leading to more forceful and even abusive behavioral responses. A helpless cognitive set contributes to both ineffective attempts at discipline and to withdrawal in the face of escalating aggressive behavior on the part of the child. All of the above certainly allows few positive or pleasurable parent-child interactions to occur, and thus prevents further emotional bonding.

Although this discussion certainly seems to indicate a strong connection between CD, parental depressed mood and cognitive patterns, research to date does not allow us to determine the direction of these effects. Depressed mood could be a result of dealing with a difficult child day in and day out for years, or it could be a characteristic brought to the relationship by the parent, or both. The negative cognitive biases evident in some studies may be a precursor to the coercive cycle or may emerge as a result of already existing interactional patterns. In either case, these characteristics always were or have become part of the parent,
are independent of the child behavior being monitored, and now exacerbate and maintain the coercive cycle (Dix & Lochman, 1990). Only longitudinal designs and studies of observed interactions will be able to tease apart these factors, and more adequately determine the direction of their influence. However, it is also possible that the depressed mood and cognitive patterns found in mothers of CD children reflect a selection bias, in that mothers who have a more depressed mood are more likely to refer their children for treatment (c.f. Gries et al., 1979).

In any case, it is obvious that the relationship between CD, cognitive patterns and depressed mood cannot be a simple one. Not all parents of children with behavior problems exhibit depressed mood, and not all children of depressed parents show CD behavior. In addition, depressed individuals have been found to display different levels of cognitive bias and emotional reactivity. Taking a transactional point of view, it is most likely that preexisting parental characteristics and beliefs interact with developing child behaviors and attitudes in a complex fashion to shape cognitions and behaviors of both parent and child in a slowly developing pattern of coercive cycles which evolve and become less flexible over time (Baden & Howe, 1992). Although the parental characteristics involved in this process would certainly include depressed mood, there may be others that are important, such as general level of tolerance or reactivity and authoritarian attitudes.
Further research must include studies which look more closely at the relationship of depressed mood and other parental variables, affect, attributions and CD. For instance, more studies making comparisons between parent-child interactions in families of depressed parents, in families with nondepressed parents, in families with abusive parents and in families with conduct-disordered children are needed. The results of the present study also seem to underline the importance of utilizing parents of conduct-disordered children who have not made referrals to any clinic in future studies of parent-child interactions. In addition, since most of the research in this area has focused on parental attitudes and emotions, and neglected those of the children, more studies looking at both child and parent cognitive and affective patterns are needed. The findings that both parent and child attributions are strong contributors to the coercive cycle (MacKinnon-Lewis & Lamb, 1992), that conduct-disordered children have similar negative attributional and affective styles to their parents (Dodge, 1980; Lochman, 1987) and that parents and children differ greatly on their attributions for the child's misbehavior (Compas et al., 1980; 1981) emphasizes the need for such research.

It appears that although coercive parent-child interactions have been firmly established as a contributing factor to CD, what lies behind these interactions has been much less clearly elucidated and requires a great deal more careful research. The attribution research shows much
promise, but in itself does not appear to satisfactorily explain what gets the coercive cycles started and how they continue to be maintained. Thus, the level of analysis needs to go somewhat deeper and explore more basic characteristics of both parents and children, such as parental depressed mood or emotional reactivity, and child temperament. Once the relationships between these factors and child behavior problems have been established, then the various pathways to CD through cognition, affect and behavior should also become clearer, providing important information for the treatment and perhaps prevention of this important social problem.
1 Since most conduct-disordered children are boys, I will use the male pronoun in this paper.

2 This dimension was later added by Abrahamaon, Seligman, and Teasdale (1978), and is usually included in discussions of Weiner's theory.

3 Since the present study was begun, findings contradictory to these age-related results were obtained by Scott and Dembo (1993). They found that mothers did not rate older children's behavior as more dispositional and intentional than younger children, even though they were more upset with the older children.

4 Since this study began, one additional study of relevance was published. Baden and Hone (1992) compared mothers of conduct disordered adolescents with mothers of non-conduct disordered adolescents on various attribution and socialization measures, and found that mothers of conduct disordered children were more likely to regard their children's misbehavior as intentional and attribute it to stable and global causes beyond their control than comparison mothers. The clinical group were also much less likely to see their own parenting as effective, leading the authors to speculate that these parents may possess cognitive sets of blame and helplessness which contribute to coercive parent behavior as well as to parental withdrawal in the face of escalating child aggression. These findings have obvious connections to the literature on depression and attributions which will be discussed in the conclusion.

5 The patterns of responding on the "forcefulness of response" scale strongly suggested that mothers did not clearly understand the instructions. Subjects from both groups gave opposite responses to what was expected (ie. punished positive behavior or rewarded negative behavior), while others simply used a different scale than the one matching their choice of parenting response (ie. chose punishment, but used the reward rating scale - cf. Appendix A). Since there was no comprehensible pattern which explained these errors, it was decided that the scores were not interpretable and they were not further analyzed. It is assumed that the use of two separate scales to choose from made this question confusing for many subjects, but has no bearing on the validity of the remaining questions on the ASQ.

6 One item was dropped because it did not clearly relate to parental discipline practices (cf. Dix and Reinhold, 1991).
APPENDIX A

Attribution/socialization Questionnaire (ASQ)
The following stories involve boys who are about 8 - 13 years old. After each story are several questions; answer each question as best you can. Some of the answers involve making your choice on a scale of numbers. For these questions, circle the number that comes closest to what you think. Answer all the questions.
John was watching T.V. in the living room, when his mom came in and let him know it was time for bed. He ignored her and kept on watching his show, even though she reminded him again.

Please answer the following questions about this story:

1. Why did the child do this?

2. How much was the behavior caused by the child's personality or character?
   - Not at all
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - Completely

3. How much was this behavior caused by the situation or circumstance?
   - Not at all
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - Completely

4. How much control did the child have over this behavior?
   - No control at all
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - Complete control

5. How much does this behavior stay the same over time?
   - Never the same
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - Always the same

6. How much was this behavior intentional or on purpose:
   - Not at all intentional
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - Completely intentional

7. How much will this behavior be the same in different situations?
   - Never the same
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - Always the same

8. How responsible was the child for this behavior?
   - Not at all responsible
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - Completely responsible
9. How does the parent feel about this behavior?

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Extremely upset

10. What should the parent do about this behavior?

11. How important is it for the parent to do something about this behavior?

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Not at all important

12. How similar should the parent's response to this behavior be if it happens again?

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Not at all the same

13. Should the parent use reward or punishment? (Circle one)

Reward               Punishment

14. How strong should the parent's reward or punishment be?

(Only use one of the following two scales.)

a) If you picked reward in question #13, use this scale:

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Mild reward

b) If you picked punishment in questions #13, use this scale:

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Mild punishment

Strong reward

Strong punishment
Phillip was asked by his mom to clean up this room before he went out to play. Later, she noticed that he hadn't done it, and saw him playing outside with his friend.

Please answer the following questions about this story:

1. Why did the child do this?

2. How much was the behavior caused by the child's personality or character?

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<tr>
<td>Not at all</td>
<td>Completely</td>
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3. How much was this behavior caused by the situation or circumstance?

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<td>Not at all</td>
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4. How much control did the child have over this behavior?

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<tr>
<td>No control at all</td>
<td>Complete control</td>
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5. How much does this behavior stay the same over time?

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6. How much was this behavior intentional or on purpose:

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<tr>
<td>Not at all intentional</td>
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7. How much will this behavior be the same in different situations?

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<td>Never the same</td>
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8. How responsible was the child for this behavior?

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<tr>
<td>Not at all responsible</td>
<td>Completely responsible</td>
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9. How does the parent feel about this behavior?

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<tr>
<td></td>
<td>Extremely upset</td>
<td>Extremely pleased</td>
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10. What should the parent do about this behavior?

11. How important is it for the parent to do something about this behavior?

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</thead>
<tbody>
<tr>
<td></td>
<td>Not at all important</td>
<td>Extremely important</td>
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</tbody>
</table>

12. How similar should the parent's response to this behavior be if it happens again?

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<tbody>
<tr>
<td></td>
<td>Not at all the same</td>
<td>Exactly the same</td>
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</tbody>
</table>

13. Should the parent use reward or punishment? (Circle one)

- Reward
- Punishment

14. How strong should the parent's reward or punishment be?

(Only use one of the following two scales.)

a) If you picked reward in question #13, use this scale:

<table>
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<tr>
<th></th>
<th>1</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild reward</td>
<td>Strong reward</td>
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</table>

b) If you picked punishment in question #13, use this scale:

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<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild punishment</td>
<td>Strong punishment</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
At supper, Billy began to tap his fork on the table. When his mother asked him to stop, he did not listen and kept on making the noise.

Please answer the following questions about this story:

1. Why did the child do this?

2. How much was the behavior caused by the child's personality or character?

<table>
<thead>
<tr>
<th>1</th>
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<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>Completely</td>
<td></td>
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</table>

3. How much was this behavior caused by the situation or circumstance?

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<tbody>
<tr>
<td>Not at all</td>
<td>Completely</td>
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</tr>
</tbody>
</table>

4. How much control did the child have over this behavior?

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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>No control</td>
<td>Complete control</td>
<td></td>
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</table>

5. How much does this behavior stay the same over time?

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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never the same</td>
<td>Always the same</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

6. How much was this behavior intentional or on purpose:

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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all intentional</td>
<td>Completely intentional</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

7. How much will this behavior be the same in different situations?

<table>
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<tr>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never the same</td>
<td>Always the same</td>
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</table>

8. How responsible was the child for this behavior?

<table>
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<th>5</th>
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<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all responsible</td>
<td>Completely responsible</td>
<td></td>
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</tbody>
</table>
9. How does the parent feel about this behavior?

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<th>4</th>
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<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Extremely upset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extremely pleased</td>
</tr>
</tbody>
</table>

10. What should the parent do about this behavior?

11. How important is it for the parent to do something about this behavior?

<table>
<thead>
<tr>
<th></th>
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<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extremely important</td>
</tr>
</tbody>
</table>

12. How similar should the parent's response to this behavior be if it happens again?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all the same</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Exactly the same</td>
</tr>
</tbody>
</table>

13. Should the parent use reward or punishment? (Circle one)

Reward Punishment

14. How strong should the parent's reward or punishment be?

(Only use one of the following two scales.)

a) If you picked reward in question #13, use this scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild reward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strong reward</td>
</tr>
</tbody>
</table>

b) If you picked punishment in questions #13, use this scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild punishment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strong punishment</td>
</tr>
</tbody>
</table>
Joey was told by his mom to put away the toys he had left in the hall. He said that he would do it, and in a few minutes stopped what he was doing and cleaned up his toys.

Please answer the following questions about this story:

1. Why did the child do this?

2. How much was the behavior caused by the child's personality or character?

   Not at all 1 2 3 4 5 6 7 8 Completely

3. How much was this behavior caused by the situation or circumstance?

   Not at all 1 2 3 4 5 6 7 8 Completely

4. How much control did the child have over this behavior?

   No control 1 2 3 4 5 6 7 8 Complete control

   at all

5. How much does this behavior stay the same over time?

   Never 1 2 3 4 5 6 7 8 Always

   the same the same

6. How much was this behavior intentional or on purpose:

   Not at all 1 2 3 4 5 6 7 8 Completely

   intentional intentional

7. How much will this behavior be the same in different situations?

   Never 1 2 3 4 5 6 7 8 Always

   the same the same

8. How responsible was the child for this behavior?

   Not at all 1 2 3 4 5 6 7 8 Completely

   responsible responsible
9. How does the parent feel about this behavior?

1 2 3 4 5 6 7 8
Extremely upset

10. What should the parent do about this behavior?

11. How important is it for the parent to do something about this behavior?

1 2 3 4 5 6 7 8
Not at all important

12. How similar should the parent's response to this behavior be if it happens again?

1 2 3 4 5 6 7 8
Not at all the same

13. Should the parent use reward or punishment? (Circle one)

Reward  Punishment

14. How strong should the parent's reward or punishment be?

(Only use one of the following two scales.)

a) If you picked reward in question #13, use this scale:

1 2 3 4 5 6 7 8
Mild reward

b) If you picked punishment in question #13, use this scale:

1 2 3 4 5 6 7 8
Mild punishment

100
Danny was playing in the back yard when his mom called him to come in for supper. A few minutes later, he came into the house and sat down at the table.

Please answer the following questions about this story:

1. Why did the child do this?

2. How much was the behavior caused by the child's personality or character?

<table>
<thead>
<tr>
<th>1</th>
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<th>5</th>
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<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>Completely</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

3. How much was this behavior caused by the situation or circumstance?

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<td></td>
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</table>

4. How much control did the child have over this behavior?

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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>No control</td>
<td>Complete control</td>
<td></td>
<td></td>
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</tbody>
</table>

5. How much does this behavior stay the same over time?

<table>
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<tr>
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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never the same</td>
<td>Always the same</td>
<td></td>
<td></td>
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6. How much was this behavior intentional or on purpose:

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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all intentional</td>
<td>Completely intentional</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

7. How much will this behavior be the same in different situations?

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<tr>
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<th>2</th>
<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never the same</td>
<td>Always the same</td>
<td></td>
<td></td>
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</table>

8. How responsible was the child for this behavior?

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<th>5</th>
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<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all responsible</td>
<td>Completely responsible</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. How does the parent feel about this behavior?

1  2  3  4  5  6  7  8
Extremely upset

10. What should the parent do about this behavior?

11. How important is it for the parent to do something about this behavior?

1  2  3  4  5  6  7  8
Not at all important

12. How similar should the parent's response to this behavior be if it happens again?

1  2  3  4  5  6  7  8
Not at all the same

13. Should the parent use reward or punishment? (Circle one)

Reward  Punishment

14. How strong should the parent's reward or punishment be?

(Only use one of the following two scales.)

a) If you picked reward in question #13, use this scale:

1  2  3  4  5  6  7  8
Mild reward

b) If you picked punishment in questions #13, use this scale:

1  2  3  4  5  6  7  8
Mild punishment

Strong reward

Strong punishment
While Tom's mother was on the telephone, he began to make a lot of noise in the same room. When she asked him to stop, he did and went to play in the other room.

Please answer the following questions about this story:

1. Why did the child do this?

2. How much was the behavior caused by the child's personality or character?

   1  2  3  4  5  6  7  8
   Not at all  Completely

3. How much was this behavior caused by the situation or circumstance?

   1  2  3  4  5  6  7  8
   Not at all  Completely

4. How much control did the child have over this behavior?

   1  2  3  4  5  6  7  8
   No control at all  Complete control

5. How much does this behavior stay the same over time?

   1  2  3  4  5  6  7  8
   Never the same  Always the same

6. How much was this behavior intentional or on purpose?

   1  2  3  4  5  6  7  8
   Not at all intentional  Completely intentional

7. How much will this behavior be the same in different situations?

   1  2  3  4  5  6  7  8
   Never the same  Always the same

8. How responsible was the child for this behavior?

   1  2  3  4  5  6  7  8
   Not at all responsible  Completely responsible
9. How does the parent feel about this behavior?

<table>
<thead>
<tr>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely upset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extremely pleased</td>
</tr>
</tbody>
</table>

10. What should the parent do about this behavior?

11. How important is it for the parent to do something about this behavior?

<table>
<thead>
<tr>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extremely important</td>
</tr>
</tbody>
</table>

12. How similar should the parent's response to this behavior be if it happens again?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all the same</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Exactly the same</td>
</tr>
</tbody>
</table>

13. Should the parent use reward or punishment? (Circle one)

| Reward | Punishment |

14. How strong should the parent's reward or punishment be?

(Only use one of the following two scales.)

a) If you picked reward in question #13, use this scale:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild reward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strong reward</td>
</tr>
</tbody>
</table>

b) If you picked punishment in questions #13, use this scale:

<table>
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<tr>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild punishment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strong punishment</td>
</tr>
</tbody>
</table>
Please answer the following questions about the questionnaire you just completed.

1. How much did you think of your own 8 - 12 year old boy when you completed these questions?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Some of the time</td>
<td>Most of the time</td>
<td>Almost all of the time</td>
</tr>
</tbody>
</table>

2. How similar are your answers in this questionnaire to those you would give about your own 8 - 12 year old boy?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all the same</td>
<td>A little bit the same</td>
<td>Mostly the same</td>
<td>Exactly the same</td>
</tr>
</tbody>
</table>

3. To what extent does your 8 - 12 year boy act the same as the children in the stories?

a) Positively - where the boy does what his mother wants:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all the same</td>
<td>A little bit the same</td>
<td>Mostly the same</td>
<td>Exactly the same</td>
</tr>
</tbody>
</table>

b) Negatively - where the boy does not do what his mother wants:

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<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all the same</td>
<td>A little bit the same</td>
<td>Mostly the same</td>
<td>Exactly the same</td>
</tr>
</tbody>
</table>
APPENDIX B

Childrearing Practices Report (CPR - Control Subscale)
Please indicate how much you agree or disagree with the following statements:

1. I have strict, well-established rules for my child.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally disagree</td>
<td>Totally agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. I believe that scolding and criticism helps my child.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally disagree</td>
<td>Totally agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. I believe my child should be seen and not heard.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>Totally disagree</td>
<td>Totally agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. I do not allow my child to say bad things about his teacher.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally disagree</td>
<td>Totally agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

5. I believe that physical punishment is best.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally disagree</td>
<td>Totally agree</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

6. I teach my child to control his or her feelings.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. My child is not allowed to question my decisions.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally disagree</td>
<td>Totally agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. I do not allow my child to get angry with me.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Totally agree</td>
</tr>
</tbody>
</table>

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APPENDIX C

Anger Self-Report (ASR)
We would like you to think carefully about the following statements and indicate as accurately as you can how each one applies to you. There are no right or wrong answers, we just want to know how you feel.

Please mark next to each statement how much you agree or disagree by using the following scale:

1 Strong disagreement 4 Slight agreement
2 Moderate disagreement 5 Moderate agreement
3 Slight disagreement 6 Strong agreement

Mark all statements.

___ 1. If I am mad, I really let people know it.
___ 2. I find that I cannot express anger at someone until they have really hurt me badly.
___ 3. I have many quarrels with members of my family.
___ 4. Whatever else may be my faults, I never knowingly hurt another person's feelings.
___ 5. I find it easy to express my anger at people.
___ 6. Even when someone does something mean to me, I don't let him or her know I'm upset.
___ 7. At times I hurt a person I love.
___ 8. It's easy for me not to fight with those I love.
___ 9. If somebody crosses me, I tend to get back at them.
APPENDIX D

CES-D Scale
Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way during the last week.

1 2 3 4
Rarely or none Some or a little Occasionally or Most or all of the time of the time a moderate amount of the time of the time

During the past week:

1. I was bothered by things that usually don't bother me.
   1 2 3 4

2. I did not feel like eating; my appetite was poor.
   1 2 3 4

3. I felt that I could not shake off the blues even with help from my family or friends.
   1 2 3 4

4. I felt that I was just as good as other people.
   1 2 3 4

5. I had trouble keeping my mind on what I was doing.
   1 2 3 4

6. I felt depressed.
   1 2 3 4

7. I felt that everything I did was an effort.
   1 2 3 4

8. I felt hopeful about the future.
   1 2 3 4

9. I thought my life had been a failure.
   1 2 3 4

10. I felt fearful
    1 2 3 4
1 2 3 4
Rarely or none Some or a little Occasionally or Most or all
of the time of the time a moderate amount of the time
of the time

During the past week:

11. My sleep was restless.
   1  2  3  4

12. I was happy.
   1  2  3  4

13. I talked less than usual.
   1  2  3  4

   1  2  3  4

15. People were unfriendly.
   1  2  3  4

16. I enjoyed life.
   1  2  3  4

17. I had crying spells.
   1  2  3  4

18. I felt sad.
   1  2  3  4

19. I felt that people disliked me.
   1  2  3  4

20. I could not get "going".
   1  2  3  4
APPENDIX E

(1) DSM-III-R Checklist of CD and ODD Symptoms (DSM-CL)
and

(2) DSM-III-R Checklist of ADHD Symptoms (ADHD-CL)
Please place an X beside the behaviors your 8-12 year old boy has displayed in the last 6 months. (Only check a behavior if it occurs more frequently than that of other boys his age.)

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ often loses temper</td>
<td>___ often starts physical fights</td>
</tr>
<tr>
<td>___ often argues with adults</td>
<td>___ has stolen directly from a victim, e.g. mugging.</td>
</tr>
<tr>
<td>___ often defies or refuses adult requests or rules</td>
<td>___ has been physically cruel to people</td>
</tr>
<tr>
<td>___ often deliberately does things that annoy others</td>
<td>___ often fidgets with hands or feet; squirms in seat</td>
</tr>
<tr>
<td>___ often blames others for his own mistakes</td>
<td>___ has trouble staying seated when required</td>
</tr>
<tr>
<td>___ is often touchy or easily annoyed by others</td>
<td>___ is easily distracted from what he is doing</td>
</tr>
<tr>
<td>___ is often angry and resentful</td>
<td>___ can't wait his turn</td>
</tr>
<tr>
<td>___ is often spiteful or vindictive</td>
<td>___ often blurts out answers to questions before asked</td>
</tr>
<tr>
<td>___ often swears or uses obscene language</td>
<td>___ has trouble doing what he is asked because of distractions</td>
</tr>
<tr>
<td>___ has stolen on more than one occasion, e.g. theft, etc.</td>
<td>___ has trouble keeping his attention on what he is doing</td>
</tr>
<tr>
<td>___ has run away from home overnight at least twice</td>
<td>___ often goes from one unfinished activity to another</td>
</tr>
<tr>
<td>___ often lies</td>
<td>___ has trouble playing quietly</td>
</tr>
<tr>
<td>___ has deliberately set fires</td>
<td>___ often talks too much</td>
</tr>
<tr>
<td>___ often skips out of school</td>
<td>___ often interrupts, intrude on others, e.g. butt into games, etc.</td>
</tr>
<tr>
<td>___ has broken into someone else's house, building or car</td>
<td>___ does not seem to listen to what is being said to him</td>
</tr>
<tr>
<td>___ has deliberately destroyed others' property</td>
<td>___ often loses things necessary for activities at home or school, e.g. pencils, toys.</td>
</tr>
<tr>
<td>___ has been physically cruel to animals</td>
<td>___ often does something dangerous without thinking about consequences</td>
</tr>
<tr>
<td>___ has forced someone into sexual activity with him</td>
<td></td>
</tr>
<tr>
<td>___ has used a weapon in a fight on more than one occasion</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX F

Child Behavior Checklist - Externalizing Subscale (CBCL-E)
Below is a list of things that describe children. For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true or often true of your child, circle the 1 if the item is somewhat or sometimes true of your child, and circle the 0 if the item is not true of your child. Please answer all items.

0 1 2 Acts too young for his age
0 1 2 Argues a lot
0 1 2 Bragging, boasting
0 1 2 Can't concentrate, can't pay attention for long
0 1 2 Can't sit still; restless or hyperactive
0 1 2 Confused or seems to be in a fog
0 1 2 Cruelty, bullying, or meanness to others
0 1 2 Daydreams or gets lost in his thoughts
0 1 2 Demands a lot of attention
0 1 2 Destroys his own things
0 1 2 Destroys things belonging to his family or other children
0 1 2 Disobedient at home
0 1 2 Disobedient at school
0 1 2 Doesn't get along with other children
0 1 2 Easily Jealous
0 1 2 Gets in many fights
0 1 2 Hangs around with children who get in trouble
0 1 2 Impulsive or acts without thinking
0 1 2 Lying or cheating

0 1 2 Not liked by other children
0 1 2 Physically attacks people
0 1 2 Poor school work
0 1 2 Poorly coordinated or clumsy
0 1 2 Prefers playing with younger children
0 1 2 Runs away from home
0 1 2 Screams a lot
0 1 2 Sets fires
0 1 2 Showing off or clowning
0 1 2 Speech problem (Describe):
0 1 2 Steals at home
0 1 2 Steals outside the home
0 1 2 Stubborn, sullen, irritable
0 1 2 Sudden changes in mood or feeling
0 1 2 Sulks a lot
0 1 2 Swearing or obscene language
0 1 2 Talks too much
0 1 2 Teases a lot
0 1 2 Temper tantrums, hot temper
0 1 2 Threatens people
0 1 2 Truancy, skips school
0 1 2 Unusually loud
0 1 2 Vandalism
### APPENDIX G

**Descriptive Statistics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blaming (Diff.)</td>
<td>-39.76</td>
<td>13.31</td>
<td>-39.0 - 22.0</td>
</tr>
<tr>
<td>Blaming (Total)</td>
<td>149.10</td>
<td>20.89</td>
<td>94.0 - 186.0</td>
</tr>
<tr>
<td>Generalization (Diff.)</td>
<td>-0.85</td>
<td>6.97</td>
<td>-14.0 - 19.0</td>
</tr>
<tr>
<td>Generalization (Total)</td>
<td>59.85</td>
<td>16.19</td>
<td>19.0 - 96.0</td>
</tr>
<tr>
<td>External (Diff.)</td>
<td>0.78</td>
<td>3.54</td>
<td>-8.0 - 7.0</td>
</tr>
<tr>
<td>External (Total)</td>
<td>31.94</td>
<td>7.57</td>
<td>11.0 - 48.0</td>
</tr>
<tr>
<td>Affective response (Diff.)</td>
<td>-11.97</td>
<td>4.46</td>
<td>-20.0 - -3.0</td>
</tr>
<tr>
<td>Affective response (Total)</td>
<td>28.39</td>
<td>4.85</td>
<td>11.0 - 37.0</td>
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<tr>
<td>Importance of responding (Diff.)</td>
<td>2.96</td>
<td>5.74</td>
<td>-7.0 - 17.0</td>
</tr>
<tr>
<td>Importance of responding (Total)</td>
<td>38.28</td>
<td>6.67</td>
<td>21.0 - 48.0</td>
</tr>
<tr>
<td>Consistency of response (Diff.)</td>
<td>-0.14</td>
<td>4.58</td>
<td>-15.0 - 9.0</td>
</tr>
<tr>
<td>Consistency of response (Total)</td>
<td>41.94</td>
<td>6.31</td>
<td>26.0 - 48.0</td>
</tr>
<tr>
<td>Anger</td>
<td>29.24</td>
<td>5.82</td>
<td>20.00 - 44.00</td>
</tr>
<tr>
<td>Depressed mood</td>
<td>12.62</td>
<td>8.14</td>
<td>0.00 - 32.00</td>
</tr>
<tr>
<td>Authoritarianism</td>
<td>21.38</td>
<td>6.79</td>
<td>11.00 - 49.00</td>
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<tr>
<td>DSM-CL</td>
<td>3.56</td>
<td>3.52</td>
<td>0.00 - 14.00</td>
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<tr>
<td>ADHD-CL</td>
<td>3.80</td>
<td>3.40</td>
<td>0.00 - 12.00</td>
</tr>
<tr>
<td>CBCL-E</td>
<td>19.14</td>
<td>12.38</td>
<td>2.00 - 48.00</td>
</tr>
</tbody>
</table>
## APPENDIX H

### Sources For Subject Sample And Response Rate

<table>
<thead>
<tr>
<th>Source</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Brothers (Greater Vancouver)</td>
<td>24/30</td>
</tr>
<tr>
<td>Valley Therapy Center (Abbotsford, Haney)</td>
<td>7/7(?)</td>
</tr>
<tr>
<td>Family Education Center (Haney)</td>
<td>3/3</td>
</tr>
<tr>
<td>Parents Together Support Group (Lower Mainland)</td>
<td>4/4</td>
</tr>
<tr>
<td>Local Churches (Burnaby)</td>
<td>2/2</td>
</tr>
<tr>
<td>Government Mental Health (Lower Mainland Region)</td>
<td>2/4</td>
</tr>
<tr>
<td>Referred by subjects</td>
<td>5/5</td>
</tr>
<tr>
<td>Family Resource Center (Haney)</td>
<td>3/3</td>
</tr>
<tr>
<td>Maple Ridge Hospital</td>
<td>-</td>
</tr>
</tbody>
</table>

50/58(?)
APPENDIX I

Recruiting Letter

Parent–Child Study
(SFU Psychology Dep

If you are the mother of an 8 - 13 year old boy, and could fill our some questionnaires, please call David Wiebe at 521-3970. Payment of $10.00 for participation.

Thank you for your help.
REFERENCES


