PARENTAL VALUES RELATED TO CONTROL IN FAMILIES WITH CHILDREN WITH SPECIAL NEEDS

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ABSTRACT

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The study examines the causes and effects of parental values related to control by examining the relationships between control values and parenting practices, children's adjustment, and perceptions of parenting competence. The sample includes two types of families with school-aged children (ages 6-18) for whom parental control is a central issue, families with children with mental retardation (N=76) and those with children with behavior problems (N=40). These groups are compared to families with children with chronic illness (N=59) and children with no disabilities (N=41). Self-report measures of parenting attitudes, parenting styles, and child adjustment were obtained from both mothers and fathers.

The results provide partial support for bi-directional models of parent-child relationships. First, as expected, the findings indicate that parental values are formed in response to different parenting experiences. Specifically, parents with children with mental retardation and behavior problems showed higher values related to control than comparison parents, particularly mothers with older children. These age-related findings suggest that parents are responsive to children's different rates of development. However, contrary to expectations, few differences in parenting practices were found. Second, as expected, the results suggest that parental values play an important role in the socialization process by influencing parenting practices, and that parenting practices predict child adjustment. In

addition, the results revealed nonlinear relationships between child adjustment and parenting control practices, in which child competence was greatest at moderate levels of punitive control and the highest levels of firm control. Finally, the results suggest that mothers maintained a sense of parenting competence, despite difficult child behavior, when their values matched their children's abilities. In contrast, fathers' perceptions of competence were directly related to children's level of adjustment. These mother-father differences may emerge from mothers' greater involvement in child care compared to fathers.

The results are discussed in terms of clinical interventions with children and families, including the potential benefits of focusing on parents' values in addition to their behaviors and of involving fathers in therapy. In addition, special considerations regarding families with children with special needs are offered.

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INTRODUCTION

The socialization of children by parents involves two broad dimensions of parenting practices, control and acceptance (Baumrind, 1991). Indeed, much research has demonstrated the effects of control-oriented parenting practices on the development of children's social and cognitive skills (e.g., Barber, Olsen, & Shagle, 1994; Portes, Dunham, & Williams, 1986). Recent theorizing in the area of parents' social cognitions suggests that the source of these practices lies in parents' beliefs, attitudes, and other cognitions about parenting (e.g., Sigel, 1985). The purpose of the present study is to examine the relationship between parents' control-oriented values and the exercise of control in parenting, as well as the relationship of these cognitions and parenting practices to children's adaptive and maladaptive behaviors. In order to better understand the causes and effects of parental control, these values and practices are examined in two types of families where parental control is central, families with children with mental retardation and families with children with behavior problems, and compares them to two comparison groups, families with typically developing children and families with children with chronic illness but no mental retardation.

The study involves three components. The first component examines how parents' control values and parenting practices are affected by experiences with different types of children. The second component examines the implications of parents' control values and practices for child development. This section tests a model of parenting process which

proposes that parenting practices mediate the relationship between parents' cognitions and children's development. This model also posits that specific types of parental control will be most effective for promoting optimal child development. Finally, the third component examines the role of parental values in either exacerbating or buffering the effects of difficult child behavior on perceptions of parenting competence. This section tests the hypothesis that less competent child behavior is associated with lower perceptions of parenting success only when children's behavior violates parents' values.

Parenting Cognitions

Recent trends in socialization research have focused on parents' child-rearing cognitions as determinants of parenting behavior and child development (e.g., Goodnow, 1988). Early attempts to understand how parents think about children and child-rearing focused on global domains of parenting attitudes (e.g., Becker & Krug, 1965). However, this line of research was disappointing in terms of understanding the relationship between parents' thoughts about child development and their actual child-rearing practices (Holden & Edwards, 1989). Therefore, research in this area turned to more specific and differentiated cognitive variables. Many ways of categorizing parenting cognitions have been proposed, and most involve at least some of the following categories: attitudes, values, beliefs, attributions, and self-perceptions. Attitudes and values are similar in that they are both evaluative beliefs about the way things should be. Whereas attitudes are specific, values are abstract goals or coherent sets of attitudes. Beliefs have been subdivided along many lines. For instance, descriptive beliefs are beliefs about how children develop, such as timetables for acquiring different skills. Instrumental beliefs, on the other hand, are beliefs about how to parent, such as beliefs about the most effective

ways of managing children's misbehavior. In theory, unlike attitudes and values, beliefs can be proved or disproved. Attributions are specific beliefs about the causes of children's behaviors and abilities. Finally, self-perceptions refer to parents' beliefs about their own parenting competence and ability to influence child development.

The underlying assumption that unites this line of research is that parenting practices are guided by the above array of cognitions about child-rearing (e.g., Grusec & Walters, 1991; McGillicuddy-DeLisi, 1982). According to this view, parents develop stable patterns of thinking about children and parenting. These patterns of thinking consist of cognitive structures and cognitive processes (Bacon & Ashmore, 1986). Cognitive structures, such as parents' implicit theories of child development, beliefs about ideal child qualities, and expectations for specific children, determine what child qualities parents notice and emphasize. Cognitive processes, such as causal attributions, determine how parents interpret child behavior. Together, cognitive structures and processes filter new experiences and enable parents to reduce and organize the volumes of information they receive regarding their children (Newberger, 1980; Kendall, 1991). Thus, parents are seen as actively processing information rather than merely reacting automatically (e.g., Rubin & Mills, 1992).

Theoretically, differences in the way parents process this information explains variations in the way parents behave towards their children. For example, Dix, Ruble, and Zambarano (1989) demonstrated how parents' values serve as a schema or filter through which information about children is processed. They found that parents with authoritarian values had higher expectations and attributed higher levels of knowledge, capacity, and responsibility to children than parents with non-authoritarian values. As a result of

inferring greater child competence, they favored more punitive discipline strategies. Similarly, parents' values may partially determine when they initiate socialization (Dix & Grusec, 1985). Thus, a parent with high conformity values is likely to intervene earlier with a child who is being disruptive in public than a parent with lower conformity values.

In addition to influencing spontaneous reactions to child behavior, parents' cognitions also affect more proactive parenting behaviors. For example, parents' beliefs about their ability to influence child development may affect their motivation to seek out and utilize community resources. Similarly, cognitions affect parenting behavior because parents become sensitized to look for information that is consistent with their ideas (Dix, Ruble, & Zambarano, 1989). This is particularly relevant to raising a child with a disability. For instance, if parents selectively attend to signs of incompetence and overlook more adaptive, independent behaviors, they may fail to behave in ways that promote skills acquisition (Siegel, Smith, & Wood, 1991). In this way, parents' cognitions, such as low expectations, may become self-fulling prophecies (Fishman, 1988). Consistently, Lavelle and Keogh (1980) found that parents who saw their child's disability as stable and caused by internal factors were more likely to focus their intervention efforts at maintaining their child's current level of functioning rather than promoting new skills.

In addition to their indirect effects on children via parenting practices, parents' cognitions are also theorized to have more direct, yet subtle effects on child development. For instance, Gallimore, Weisner, Kaufman, and Bernheimer (1989) propose that values are transmitted to children through day-to-day interactions, routines, and activities. That is, parents' values influence the people children are exposed to, the activities children participate in, and the unwritten rules that shape or constrain their participation. By

influencing the organization of the child's daily routine, parents' values minimize or maximize the child's opportunities to learn different skills by exposing them to different environments.

Finally, for families raising children with special needs such as mental retardation or behavior problems, parents' cognitions play an important role in clinical interventions. That is, distorted, biased, or unrealistic cognitions may underlie some difficulties in adapting to raising a child with special needs. For example, parenting programs for parents with children with mental retardation commonly address two maladaptive beliefs: that children's misbehavior is an unalterable part of the mental retardation and that an inability to control one's child at all times in equivalent to being a failure as a parent (Briener, 1989). Similarly, interventions with parents with children with behavior problems often focus on the parent's perceptions, expectations, and attitudes as well as the child's behavior (Rogers, Forehand, & Griest, 1981). Finally, family therapists argue that beliefs about parenting roles and responsibilities can lead to rigid family structures that are detrimental to family functioning. For example, parenting role beliefs are related to two family processes commonly seen in families with children with disabilities, an over-involved mother and a peripheral father (Combrinck-Graham & Higley, 1984) and the neglect of other family members' needs in order to protect the disabled child (Beavers, 1989).

The focus of the present study is on parenting values related to the exercise of control in parenting. A value is a judgment about a desirable end-state of existence or a broad mode of conduct, such as equality or honesty (Bem, 1970). Values are considered core beliefs that partially determine how one behaves, how one judges the behavior of

others, and how one defines the end states worth striving for in oneself and one's children (Rokeach, 1972). Values differ from beliefs in that they require no logical justification. In addition, values are probably more stable than beliefs because they involve a stronger emotional investment (Goodnow, 1988).

Specifically, the present study focuses on an array of values related to the issue of control. These include both values related to child behavior and values related to parenting roles. Values regarding child behavior refer to parents' child-rearing goals (Antil, 1987). Parents base their child-rearing goals on the qualities or end-states that they value and want to see in their children. These values and goals determine the way in which parents respond to children's behavior, as well as how they organize the environment and structure their child's future (Trommsdorff, 1983). In particular, parents' valuation of self-direction versus conformity is examined (Kohn, 1977). Higher conformity values, such as valuing obedience to parents, indicates greater control values on the part of parents. In contrast, higher self-direction values, such as valuing independent thinking, indicates lower control values. Regarding parenting roles, this study examines the way in which parents prioritize their child-rearing responsibilities (Newberger & White, 1989). In particular, values regarding the necessary and appropriate role for parents in two domains are considered: discipline and teaching. Both discipline and teaching roles rely on the greater authority and competence of the parents (Hess & McDevitt, 1984), and therefore greater valuation of each of these roles reflects greater control values.

Factors that Affect Parental Values and Practices

Much research has focused on how social class affects parents' values (e.g., Goodnow, 1985). Kohn (1977) first proposed that the qualities and skills required of a parent in the workplace might influence the qualities parents value for their children. Thus, he hypothesized that working class parents, for whom obedience and following directions were adaptive skills at work, would value conformity in their children, while parents in managerial and professional positions, for whom initiative and decision making were adaptive skills, would value self-direction in their children. Many studies measuring various indices of social status have supported these proposed relationships. In particular, self-direction and conformity values have been predicted by parents' degree of occupational self-direction and occupational status (Luster, Rhoades, & Haas, 1989) and by parents' level of education and income (Schaefer & Edgerton, 1985). In both of these studies, higher levels of social class were associated with higher self-direction values and lower conformity values. Spade (1991) examined the relative contributions of a number of background characteristics in predicting self-direction and conformity values, and found that parents' education was a better predictor of parents' values than occupational status and income. Finally, Burns, Hormel, & Goodnow (1984) expanded the measurement of social class and found that street type, immigrant status, and neighborhood quality predicted parents' values better than traditional social class indicators.

In addition to social class, child gender has been found to be a salient determinant of parents' child-rearing values, expectations for children's conduct and achievement, and

interpretations of child behavior (Okagaki & Divecha, 1993). Regarding parental values, Block (1978) found that parents value achievement more for boys than for girls. Similarly, Hoffman (1977) found that parents of boys value independence and self-reliance more than parents of girls, while parents of girls value being kind and loving, and being a good parent. Finally, Burns, Hormel, & Goodnow (1984) found that mothers of boys valued sex-types behaviors more than mothers of girls and mothers of girls valued being neat and clean more than mothers of boys. More recent research, however, indicates few gender-based differences in parents' valuation of conformity versus self-direction (Ellis & Petersen, 1992).

Above and beyond the effects of social class and child gender, however, little is known about sources of variation in parents' values. In particular, we need to understand how the child him/herself affects parenting values and practices. Goodnow (1988) proposes that parents actively construct their cognitions based on their individual experiences with children, such as the number and spacing of their children or their types of experiences with children (e.g., mothers versus fathers). For example, parents' beliefs about children's cognitive development may become more sophisticated when parents have several children, since they are exposed to differing capabilities and rates of development (McGillicuddy-DeLisi, 1982). One condition in which parents are likely to reflect upon and modify their cognitions based on child characteristics is when the child has abilities that set him or her apart from most other children (Sameroff & Feil, 1985). The hypothesis that parents' values are formed in response to child characteristics is consistent with theories regarding the reciprocal influences between parents and children (Bell & Chapman, 1979; Sameroff, 1975). Bell's (1979) bi-directional model of parent-child

relationships proposes that parents do not indiscriminately treat all children the same way, and instead, unique characteristics of children influence parenting behaviors and parent-child interactions. Thus, by triggering different responses from parents, children contribute to their own development (Bell & Harper, 1977). Accordingly, the first part of the study tests the hypothesis that parents' values are formed in response to their experiences raising different types of children.

In contrast to the literature on parenting values, there is a great deal of research indicating that parents have different styles of interacting with children, and that some of the variation in parenting practices is driven by child characteristics. Several studies demonstrate how children influence control-oriented parenting practices. For instance, Stice and Barrera (1995) studied parental control strategies and children's substance use and externalizing behavior problems in a community sample of adolescents. They found that adolescent substance use and behavior problems prospectively predicted increases in parents' controlling behaviors over a one year period. Rubin and Mills (1992) also examined the effects of child characteristics on mothers' self-reported intervention strategies. In particular, they identified subgroups of mothers whose 4 year old children were either extremely aggressive or extremely withdrawn. They found that mothers of both withdrawn and aggressive children favored directive teaching strategies more than mothers of average children. Mothers of withdrawn children were also more likely to choose coercive strategies for dealing with both withdrawal and aggression than the other mothers. In contrast, mothers of aggressive children were most likely to favor indirect strategies for dealing with withdrawn and aggressive behavior, or to favor no intervention at all. Finally, Barkley (1985) provides a review of research with mothers of hyperactive

children that suggests that mothers' styles of interaction are responsive to the child's behavior. For example, mother-child interactions were observed under two conditions, when the child was taking stimulant medications and a placebo condition. They found that when the children's disruptive behavior was reduced by the medications, mothers also reduced their directive behaviors and were more attentive than when they were interacting with their children without medications.

Child characteristics have been found to influence parenting practices in samples of disabled children as well. For instance, Brooks-Gunn and Lewis (1984) studied the influence of three infant characteristics, chronological age, mental age, and handicapping condition (Down syndrome, developmental delays, and cerebral palsy) on mothers' responsiveness during interactions with their children 3 to 36 months of age. They found that the mothers of infants with higher mental ages were more responsive than mothers with infants with lower mental ages, regardless of chronological age or handicapping condition. Similarly, a study by McGillicuddy-DeLisi (1992) suggests that child characteristics are particularly important influences on parenting practices when the child has a handicap. In particular, this study examined parental teaching styles in families with and without a child with a communication handicap. The results of a path analysis showed that the ability level of the communication handicapped child predicted both mothers' and fathers' teaching behaviors. In contrast, children's ability levels in the non-handicapped group were not significant predictors of parents' teaching behaviors.

Thus, in addition to examining the influence of child characteristics on parental values, the present study also examines the hypothesis that the experience of raising different types of children affects parenting styles. In particular, because the demands of

raising children with mental retardation and behavior problems require increased parental control, parents with children with mental retardation and parents with children with behavior problems are expected to demonstrate both higher control values and more controlling parenting practices than parents with typically developing children. That is, parents' values and practices are expected to "fit the demands of the job" (Goodnow, 1985), so that parents come to value qualities that facilitate their parenting responsibilities and maintain their motivation to act on behalf of their child.

The effects of raising a child with mental retardation on parents' values and practices.

On a fundamental level, raising children with handicapping conditions affects family members' views of their individual roles and responsibilities within the family, and in some respects, their views of the world in general (Patterson & Garwick, 1994). In response to the birth of a handicapped child, the family is faced with the task of reorganizing the family structure and relationships to accommodate the disabled child. Part of this reorganization often involves examining core values in order to make sense out of the handicap (Foster, 1986). Early studies reported that children with mental retardation had a pervasive negative impact on parents' attitudes, and that mothers with children with mental retardation were more rejecting than mothers with typically developing children (Cummings, Bayley, & Rie, 1966; Ricci, 1970). Similarly, parents with children with handicaps were found to have reduced expectations for their children's emotional, intellectual, and social development (e.g., Long & Moore, 1979). More recent research, however, has challenged this pessimistic view of families with children with disabilities, and instead supports a model of individual and family competence. For instance, Van Riper, Ryff, and Pridham (1992) found that families with children with

Down syndrome did not differ from typical families on any measure of individual well-being, family functioning, or marital relationships. Similarly, Patterson and Garwick (1994) suggest that the nature of alteration in parents' cognitions based on the experience of raising a child with a handicapping condition is adaptive. For instance, parents may selectively attend to the positive aspects of the child and minimize the child's limitations, or exaggerate the benefits of child characteristics which cannot be changed.

There are many characteristics of children with mental retardation that set them apart from typical children, such as cognitive deficits, limited adaptive behavior skills, and increased need for direct child care (Crnic, 1990; Baxter, 1992). The child's intellectual limitations and dependency require that parents strike a balance between protecting and challenging handicapped children (Beavers, 1989; Foster, 1986) without the aid of norms or guidelines for forming appropriate expectations (Lavelle & Keogh, 1980; Strom, Rees, Slaughter, & Wurster, 1981). Also, parenting a child with mental retardation may require much time and effort in terms of physically caring for the child, promoting independent functioning, and managing inappropriate or disruptive behavior (Karnes & Teska, 1980; Tarver-Behring, Barkley, & Karlsson, 1985). For example, mothers with infants with Down syndrome compared to mothers with typically developing children spend more time in daily caretaking activities, experience more difficulty with feeding, bathing, and dressing the child, and have less time to themselves (Erikson & Upshur, 1989). Consistently, observations of parent-child interactions have found that parents of children with mental retardation are more domineering and controlling and spend more time managing child behavior than parents with typically developing children (Floyd & Costigan, in press; Stoneman, Brody, & Abbott, 1983; Long & Moore, 1979).

Thus, parents with children with mental retardation may value more control and need to exercise more control and guidance than parents with typically developing children. A greater emphasis on control and obedience in the home may be part of a generalized effort to reduce dangerous or aversive behaviors and to protect their children from dangers related to their child's lack of understanding of personal safety (Harris, Carpenter, & Gill, 1988). Additionally, children with mental retardation do not press for increased autonomy and freedom with the same vigor as typically developing children (Foster, 1986). Thus, even if parents initially valued self-direction, this value is not reinforced by the child and therefore may not be stressed. At the same time, children with mental retardation need more guidance than typically developing children to learn basic self-care skills and social skills (Harris, Carpenter, & Gill, 1988). Therefore, higher levels of parental control are adaptive to the extent that parents challenge their children to exhibit more mature behaviors and independent functioning skills.

The effects of raising a child with behavior problems on parents' values and practices.

Children with behavior problems are similar to children with mental retardation in that they elicit increased parental control. For example, the inattention, impulsivity, and overactivity of children with attention deficit disorder require parents to constantly monitor and direct children's activities. In general, children with behavior problems are less compliant, more demanding of attention, less affectionate, and less prosocial than typically developing children (Rogers, Forehand, & Griest, 1981; Tarver-Behring, Barkley, & Karlsson, 1985; Crowell & Feldman, 1988). Additionally, observational studies demonstrate that mothers with children with behavior problems issue more commands and negative control statements (Tallmadge & Barkley, 1983; McMahon &

Forehand, 1988; Campbell, Breaux, Ewing, Szumowkski, & Pierce, 1986), provide more structure and supervision (Barkley, 1985), and are less likely to accept ideas or direction from their children (Webster-Stratton, 1985a). This is an important group also because unlike mental retardation, parents' cognitions may be implicated, in part, in the development or maintenance of the behavior problems (e.g., McMahon & Wells, 1989). For instance, research has demonstrated that parents of clinic-referred children are more likely than parents of non-referred children to mislabel neutral child behavior as deviant and that parents' perceptions of child behavior, rather than actual child behavior, best discriminates between parents of clinic-referred children and parents of typically developing children (e.g., McMahon & Forehand, 1988).

Therefore, the parents of children with behavior problems are also expected to endorse high levels of control values and parenting styles. Since children with behavior problems present more management problems than other children, their parents may focus on discipline struggles to the exclusion of other aspects of the parent-child relationship. Consistently, research with mothers with hyperactive children has found that these mothers exert more effort to control and structure their children's behavior than mothers of typically developing children (e.g., Campbell, 1975). Consequently, these parents may be more likely to endorse conformity values for their children and disciplinarian roles for themselves and more likely to favor control-oriented parenting practices than parents with typically developing children.

In summary, the first component of this study examines the effects of child characteristics on parenting values and practices, and tests the hypothesis that parents with children with mental retardation and behavior problems endorse high control values (lower

self-direction values, higher valuation of parental discipline and teacher roles) and favor control-oriented parenting practices (both firm control and power-oriented control) compared to parents with typically developing children and parents with chronically ill children. Parents with children with chronic illness are an important comparison because, as a group, these parents face many of the same stressors as parents with children with mental retardation (e.g., Turner-Henson, Holaday, & Swan, 1992; Bartholomew, 1986), but, at least for the children included in the present study, without the presence of intellectual limitations or the reduced potential for independent functioning across the life span. Furthermore, although the primary focus of this study concerns parental control, parents' reports of family closeness are also examined, testing the hypothesis that the exercise of greater control may be at the expense of family cohesion and warmth. Consistently, families with children with behavior problems have been found to be less warm and more conflictual than comparison families (Webster-Stratton, 1985a; Haddad, Barocas, & Hollenbeck, 1991). Similarly, families with children with mental retardation are observed to engage in fewer positive, playful exchanges than comparison families (Floyd & Phillippe, 1993). In addition, the effects of child gender and child age are also considered in order to evaluate how child disabilities interact with other child characteristics in forming parents' values and parenting styles. For instance, the effects of disabilities on parents' values or parenting practices may be especially salient during specific age periods. Alternatively, children's disabilities may override or interfere with values or parenting practices based on more normative child characteristics. Finally, since mothers generally have more child-care responsibilities than fathers (e.g., Bristol, Gallagher, & Schopler, 1988), mothers are expected to report higher levels of controlling

values and parenting practices than fathers across all groups of families.

The Effects of Parental Control on Child Development

Attempts to understand the nature and impact of controlling parenting behaviors on child adjustment have identified a wide range of behaviors that fit under the rubric of "control." In a review of the literature related to parents' exercise of control, Maccoby (1984) distinguishes between firm enforcement and restrictive control. Other components of parental control include demandingness, overprotection, and rejection/ hostility (e.g., Barber, Olsen, & Shagle, 1994), but also monitoring, supportive control, and anticipatory guidance (e.g., Petit & Bates, 1989; Baumrind, 1991). From the range of control-oriented behaviors that have been identified, it is clear that control is a multidimensional construct. The implication is that some types of control facilitate adaptive child outcomes, while other types hinder the development of positive qualities in children. For instance, Crockenberg and Litman (1990) found that mothers' power assertive behaviors, including threats, physical interventions, and criticisms, were associated with more child defiance, whereas firm control and guidance was associated with increased child compliance to maternal demands.

Firm Control versus Power-Oriented Control. In the present study, two forms of parental control are distinguished, firm control versus power-oriented control. Firm control refers to the provision of structure and organization, guidance, and consistency. On this dimension, parents' controlling behavior ranges from enforcing clear rules and routines to providing lax structure and inconsistent discipline. Power-oriented control refers to more coercive control that relies on the greater authority of the parent to manage

children's behavior with strict punishment. On this dimension, parents' controlling behavior varies in the extent to which authoritarian power is used to establish and enforce rules and routines.

For two reasons, both types of controlling styles have important effects on child adjustment. First, parents' control styles have implications for children's development because the structure, predictability, and consistency parents provide affects the nature and extent of independence and self-control training children receive (e.g., Gallimore et al., 1989). Therefore, parental control that involves a high level of parental monitoring and guidance, paired with maturity expectations, facilitates the development of independent functioning skills and prosocial behaviors (e.g., Baumrind, 1993). Alternatively, control strategies that are harsh or punitive are associated with less adaptive child development. For example, coercive control practices may adversely affect child adjustment by reinforcing oppositional child behaviors (e.g., Patterson, 1982), providing the child with hostile and critical models of relationships (Pettit, Bates, & Dodge, 1993), and hindering the development of self-restraint (Feldman & Weinberger, 1994). Second, parents' approach to discipline teaches children important lessons about their own capacity for self-control as well as how to control others (Pettit & Bates, 1989). Control strategies that rely on the parents' greater authority and children's unquestioning obedience do not teach children qualities such as self-reliance, perseverance, or problem-solving. Instead, these practices highlight the (unbalanced) parent-child relationship rather than the specific content the parent is trying to teach, discourage the child's participation in problem-solving, and undermine the development of a sense of competency in the child (Hess & McDevitt, 1984).

Two basic approaches have been adopted in studying the effects of parental control on child adjustment. In the first approach, researchers obtain self-reports of parents' behavior from adolescents and look for evidence that these reports of parenting styles are associated with the adolescents' adjustment. The research program of Steinberg, Dornbusch and colleagues is representative of this approach. For instance, Dornbusch, Ritter, Liederman, Roberts, and Fraleigh (1987) were interested in the relationship between parenting styles and academic achievement. They asked adolescents to rate their parents' behavior on three parenting styles that conform to Baumrind's (1989) typology: authoritarian, permissive, and authoritative. Their results showed that authoritative parenting practices were associated with higher grades, while authoritarian and permissive parenting styles were associated with lower high school grades. Furthermore, although they found differences in the mean rates of each parenting style based on child gender, parents' education, and family structure, the pattern of relationships among the parenting styles and adolescent achievement was similar across these subgroups.

In another study of parental influences on adolescent achievement, Steinberg, Elmen, and Mounts (1989) focused exclusively on parents' degree of authoritativeness. Three components of authoritative parenting were identified: acceptance, behavioral control, and psychological autonomy granting. They found that all three components made significant, independent contributions to the prediction of high school grades both concurrently and one year later. Furthermore, they found that the effect of authoritative parenting on school performance was mediated by the adolescent's level of psychosocial maturity, in terms of self-reliance, perseverance, and self-esteem. Finally, Steinberg, Lambourn, Dornbusch, and Darling (1992) also measured the above three components of

authoritative parenting, but instead of treating each component as an independent variable, they combined the three indices of authoritative parenting to classify parents' degree of authoritativeness on a 4 point scale. Consistent with the above studies, their results showed that authoritative parenting was associated with better school performance one year later. In addition, they found that the effects of authoritative parenting styles on school performance were mediated by increased parental involvement in children's school activities.

Overall, these studies demonstrate a positive relationship between authoritative control practices and school achievement, and a negative relationship between authoritarian control practices and school achievement. However, since this line of research has focused exclusively on cognitive outcomes and adolescent development, it is unknown how these parental control practices relate to children's social development or to the development of younger children. In addition, there are potential methodological weakness to this approach of studying parental influence on child development, since adolescents may not accurately report on their parents' behaviors.

The second approach to understanding the relationships between parenting control practices and child adjustment involves direct observations of mothers and their young children. The work of Kochanska, Kuczynski, and colleagues is representative of this approach. In contrast to the cognitive outcomes examined in the studies reviewed above, this research has focused on the relationship between control strategies and children's behavior. In an early study, Kuczynski (1984) observed mothers interacting with their 4 year old children in two situations, one in which the mothers attempted to gain immediate compliance from their children and another in which the goal was to obtain compliance

from the child in the mothers' absence. They found that mothers used different types of behaviors to obtain compliance under these two conditions. In the immediate compliance condition, mothers were more likely to use power-oriented behaviors, while in the long-term compliance condition, mothers were more likely to reason with their children. Most importantly for our purposes, although power-oriented strategies were effective for obtaining immediate compliance, they were associated with higher rates of noncompliance in the long-term. Thus, it was concluded that power-oriented control strategies discourage internalization.

A study by Kochanska and Askan (1995) also demonstrates the negative relationship between power-oriented maternal control and children's compliance with maternal demands. In this study, mothers and their 21 to 41 month old children were observed interacting together. Two types of maternal control were distinguished, gentle control and forceful control. The results showed that forceful control was related to less compliance and more passive noncompliance, overt resistance, and defiance, whereas the use of gentle control showed the opposite effects. However, they also found that mother-child positive affect was more strongly related with child compliance than any form of control. Finally, Kuczynski and Kochanska (1995) conducted a longitudinal study of the effects of maternal demands on the compliance of their 1.5 to 3.5 year old children. In this study, they distinguished between competence-oriented demands (request to perform an action) and regulatory controls (demands to stop performing an action). They found that these latter prohibitive interventions were related to less compliance and increased behavior problems at age 5, while demands for competent action were related to greater compliance and fewer behavior problems at age 5.

One advantage of this approach is that measures of parental behaviors are directly observed and therefore are not biased by the reporter. However, observational studies of parenting behaviors have been criticized because the behaviors observed in the laboratory setting may not generalize to behaviors outside of the laboratory. For instance, it is possible that the observational context creates a strong motivation to manage disruptive behavior, resulting in an overestimation of parental control or an uncharacteristic representation of the types of control most often used by parents (Stice & Barrera, 1995). However, two studies by Kochanska and Kuczynski present data suggesting that self-reports of parenting practices, such as the ones used in the Steinberg at al. studies, and observations of maternal behaviors are relatively consistent with one another. For instance, Kochanska (1990) found that maternal self-reports of authoritative parenting practices were associated with higher rates of observed prohibitive interventions and more frequent autonomy-granting practices. Similarly, Kuczynski and Kochanska (1995) found that self-reports of authoritative parenting styles were related to more demands for competent action and fewer prohibitions, while self-reports of authoritarian parenting styles were related to more prohibitions. Thus, it seems that there is some consistency between parents' reports of their child-rearing practices and observations of parent-child interactions.

Overall, these studies show that maternal control styles have differential implications for the development of children's capacity for internalization and self-control. However, these observational studies have only included very young children, and so less is known about parental control practices and the development of school-aged children. In addition, fathers' parenting practices were not examined in any of the studies reviewed

above. That is, in the Steinberg et al. studies, adolescents reported on their "parents" behaviors, without distinguishing between mothers and fathers, and the Kochanska, Kuczynski, et al. studies included only mothers.

In contrast to the evidence for relationships between parents' control practices and child development, much less is known about the relationships between parents' *values* and child development. In theory, the relationship between parents' cognitions and child development is mediated by parenting behaviors (e.g., McGillicuddy-DeLisi, 1985). In practice, there are no studies that simultaneously examine all three constructs related to the exercise of control in parenting. Thus, the second component of the present study examines whether parental control values show similar relationships to child adjustment as parenting practices, and whether control values are associated with child adjustment above and beyond their association with parenting practices. A model of these proposed relationships is presented in Figure 1.

First, in order to support the mediational model, parental values should be related to measures of child adjustment. Consistently, mothers' conformity values are associated with relatively lower mental test scores and lower teacher ratings of curiosity and creativity (Schaefer & Edgerton, 1985), and self-direction values are associated with higher verbal intelligence in young children (Schaefer, 1988) and higher achievement test scores in older children (Okagaki & Sternberg, 1991).

Second, in order to support the mediational model, parents' values and parenting practices need to be related in a meaningful and consistent manner. Three studies illustrate the relationships between parental control values and parenting practices. First,

Segal (1985) examined maternal role values in a sample of mothers from low socioeconomic areas participating in an early intervention program. She found that mothers who valued their role as their child's teacher did not value their role as a disciplinarian. In addition, the mothers with higher teacher role values spent more time participating in parent-child learning activities sponsored by the intervention program. Second, Luster, Rhoades, and Haas (1989) studied the relationship between maternal child-rearing values and observations of maternal support and restraint. They found that mothers with higher conformity values were rated by observers as less involved, less warm, and more restrictive of their children's actions, and reported more frequent use of physical punishment. In contrast, higher self-direction values were associated with rater observations of higher levels of involvement, higher levels of warmth, and less frequent restriction of children's behavior. Third, Iverson and Segal (1992) examined the relationships between mothers' child-rearing values and mother-child interactions in a sample of 3 to 5 year old children. They distinguished between obedience values and process goals (e.g., independence, imagination, responsibility). Neither value was related to mother's use of directives or limits during the mother-child interaction. However, higher process goals were associated with more time spent interacting with the child and a higher rate of questions and comments directed at the child during the interaction.

Since there are no studies in which control values, control-oriented parenting practices, and child development are considered simultaneously, it is not known whether parental values are associated with child adjustment above and beyond the effects of parenting practices. Accordingly, the present study tests the hypothesis that parental control values influence children's adjustment through their association with controlling

parenting styles. Both positive and negative indices of children's social adjustment are assessed. First, consistent with previous research in this area, the relationship between parenting and children's externalizing behavior problems is evaluated. Second, children's adaptive behavior skills, in terms of self-direction skills and social responsibility skills, are evaluated. In addition, the present study expands on previous research by including a wide age-range of children (6 to 18 years old) and by studying the proposed relationships for mothers and fathers separately.

Finally, in addition to the linear effects described in the above review, it is also important to consider that the effects of parental control on child adjustment may not be linear. In particular, the relationship between control and child development may be curvilinear rather than linear (Kurdek & Fine, 1994). Baumrind (1991) theorized two potential nonlinear relationships between control and child development. First, parental control may demonstrate an inverted-U relationship, in which moderate levels of control are related to optimal child development. Alternatively, Baumrind speculated that there may be a threshold after which higher levels of parental control are no longer associated with increases in child adjustment. Kurdek and Fine (1994) tested for nonlinear relationships between parental firm control and the development of adolescent's psychosocial competence and behavioral self-regulation. They found that higher levels of firm control were linearly associated with more competent adolescent functioning. In addition, they found a curvilinear relationship between firm control and adolescent adjustment. However, the nature of this complex relationship was not either of the types Baumrind hypothesized. Instead, they found that the relationship between firm control and adjustment grew progressively stronger at higher levels of firm control. That is, at the

lower end of the continuum, firm control was minimally related to children's adjustment, whereas at the high end of the continuum, firm control showed a strong positive effect on children's adjustment. Thus, at least for the type of firm control associated with authoritative parenting, high levels appear to be particularly beneficial.

Roberts (1986) also evaluated nonlinear relationships between parental control and the social competence of preschoolers. In addition, this study assessed both firm control, as rated by observers, and strict control, as reported by parents. The results demonstrated a curvilinear relationship between observations of parents' firm control and children's social competence. Consistent with Baumrind's hypotheses, the nature of this complex relationship was an inverted-U function, so that moderate levels of firm control were associated with optimal levels of social competence, and relatively low and relatively high levels were both associated with lower levels of competence. Finally, an even more complicated sigmoidal relationship (a fourth-degree polynomial function) was found between mothers' strict control and children's behavioral competence. Although the nature of this relationship was complex, the pattern indicated that the highest child competence scores were associated with both low and moderately high levels of strict control, with a sharp decrease in social competence scores at the highest levels of strict control.

In summary, much controversy over the exact nature of the relationship suggests the need to investigate linear and curvilinear associations of control with child adjustment. Accordingly, the second component of this study tests the hypothesis that higher levels of firm control are associated with more competent child adjustment, whereas higher levels of power-oriented control are associated with less competent child adjustment. In

addition to parental control styles, higher levels of family closeness are also expected to be related to more competent child behaviors (e.g., Stice & Barrera, 1995; Kurdek & Fine, 1994). Furthermore, if curvilinear relationships are evident, higher levels of firm control are expected to be associated with greater child competence in an accelerated manner, whereas mid-levels of power-oriented control are expected to be related to optimal child competence. Regarding parental values, higher self-direction values and teacher role values are expected to be related to greater child competence, whereas higher discipline role values are expected to be related to less competent child adjustment. In addition, this component tests the hypothesis that parenting styles mediate the association between parental values and child adjustment. The above relationships are evaluated separately for mothers and fathers, testing the hypothesis that mothers' values and parenting styles are better predictors of child adjustment than those of fathers (e.g., Pettit, Bates, & Dodge, 1993; Gjerde, 1988). Finally, since optimal parenting should not differ across different types of families, no differences in these relationships are expected based on the child's disability status.

Implications of Parental Control Values for Perceptions of Parenting Success

The third component of this study examines the implication of parents' control values for their own perceptions of success in the parenting role. Perceptions of parenting success are indicated by parents' beliefs about their ability to control children's behavior and the degree to which they blame themselves for children's misbehavior, so that people who feel more successful as parents perceive greater control over child behavior and less responsibility for child misbehavior than people who feel relatively less successful.

Most previous research regarding perceptions of parenting competence has conceptualized beliefs about control and responsibility as resources that parents bring to the task of parenting in much the same way as they bring different values and have different parenting styles. Several studies suggest that understanding the sources of parents' control and responsibility beliefs is important because perceptions of parenting competence are associated with personal and family well-being. For instance, Holloway and Machida (1992) studied parenting and child adjustment in a sample of recently divorced women and found that mothers who perceived little control over child behavior and who attributed children's misbehavior to their own parenting had more health and psychological problems than mothers with higher beliefs regarding their own control and mothers who assumed less responsibility for children's behavior. Similarly, in families with children with handicaps, Frey, Greenberg, and Fewell (1989) found that parents who rated their own parenting efficacy high had lower scores on measures of parenting stress and psychological distress, whereas perceptions of low control were related to higher levels of stress. Finally, Koeske and Koeske (1992) found that an internal parenting locus of control was associated with higher levels of self-esteem and parenting satisfaction.

Parents' perceptions regarding their own control are also related to their parenting practices. For instance, the Holloway and Machida (1992) study discussed above also found that mothers with higher control beliefs used more effective parenting styles, such as setting appropriate limits, and showed more effective coping strategies. Similarly, Luster and Rhoades (1989) studied the relationship between mothers' perceptions of parenting efficacy and observations of their interactions with their young children and the structure of their homes. They found that mothers who believed that they had more

influence over child development provided relatively more supportive home environments.

Furthermore, a series of studies by Bugental and colleagues indicates that perceptions of perceived control may moderate the effects of child characteristics on parents' behaviors and emotions, so that low perceived control makes parents more vulnerable to difficult children. For example, Bugental et al. (1980) trained children to be either responsive or unresponsive, and then observed women interacting with them. They found that women with low perceived control beliefs were less assertive when interacting with unresponsive children compared to responsive children, whereas the behavior of women with high perceived control beliefs was unaffected by child responsiveness. Another study by Bugental and colleagues demonstrates that perceptions of control are also related to affective reactions to child behavior. In this study, Bugental, Blue, Cortex, Fleck, Kopeikin, Clayton, and Lyon (1993) used computer simulated children who were either responsive or unresponsive to examine the influence of women's perceived control beliefs on their autonomic and affective responses. They found that women with low perceived control were maximally physiologically aroused by child characteristics, so that they reacted differently to responsive and unresponsive children, whereas high perceived control women showed more consistent affective reactions to all children.

Finally, several studies suggest that parents' control and responsibility beliefs influence children's adjustment. For instance, Keltikanga-Jarvinen (1990) found that mothers who perceived more personal control tended to have less aggressive children, whereas mothers who perceive less personal control tended to have more aggressive children. Similarly, DeMaso, Campis, Wypij, Bertram, Lipshitz, & Freed (1991) found that mothers with external parenting locus of control beliefs had children with higher levels

of behavior problems. Finally, mothers seeking psychological services for their children's behavior problems report lower perceived parent control as well as greater perceived child control than non-referred mothers (Mouton & Tuma, 1988; Campis, Lyman, & Prentice-Dunn, 1986).

Although the above studies interpreted the direction of effects as parents' beliefs influencing children's adjustment, these results can also be understood in the reverse direction. That is, experience with different types of children may have implications for parents' sense of competency. Consistently, Mash and Johnston (1983) found that parents with hyperactive children reported less control than parents with typically developing children. Similarly, Teti and Gelfand (1991) found that mothers with infants with difficult temperaments reported lower efficacy beliefs. Finally, Baden & Howe (1992) found that mothers with conduct disordered children were less likely to rate their own parenting as effective than mothers of nonclinic children.

In addition to the influence of children's adjustment on perceptions of parenting success, parents' control values may be directly related as well (e.g., Swick and Graves, 1986). However, it is unlikely that there is a one-to-one correspondence between parents' control values and their perceptions of parenting success. Instead, control values may moderate the relationship between children's behavior and parents' perceptions of parenting success. That is, control values are probably not inherently good or bad in terms of perceptions of parenting competence, and instead may become problematic only when they are violated (e.g., Baucom, Epstein, Sayers, & Sher, 1989). Research on children's temperament suggests that it is the "goodness of fit" between child characteristics and the social and physical characteristics of the environment that determine children's adjustment

(Lerner, 1993). This model proposes that children's temperamental characteristics are positively associated with psychosocial adjustment when they conform to the demands of home or school, and are negatively associated with adjustment when they are incongruent with environmental demands (Lerner, 1984; Lerner, Lerner, & Zabski, 1985). This model may apply to parents' adjustment as well children's, in that it may be the "goodness of fit" between parental values and child behavior that determines perceptions of parenting success or failure. For instance, a high level of behavior problems may be associated with lower perceptions of parenting success only when parents highly value parental control or child conformity. In this way, parents' control values may either exacerbate or buffer the effects of having a difficult child on perceptions of parenting competence.

In summary, the final component of this study tests the hypothesis that less competent child adjustment is associated with lower perceptions of parenting success, in terms of higher levels of self-blame for child misbehavior and lower levels of perceived parenting control, only when children's behavior violates parents' values. Thus, higher levels of behavior problems are expected to be related to lower perceptions of parenting success for the parents who endorse high control values (low self-direction values and high discipline role values), but not for parents with lower control values. Similarly, lower levels of adaptive functioning are expected to be associated with lower perceptions of success for parents with high self-direction values and high teacher role values only.

Summary of Hypotheses

Part 1: The Effects of Child Group on Parental Values and Practices

1. Parents with children with mental retardation and behavior problems will endorse high control values and favor control-oriented parenting practices compared to parents with typically developing children and parents with chronically ill children.

2. The exercise of greater control in families with children with mental retardation and children with behavior problems will be at the expense of feelings of family closeness.

3. The effects of child gender and child age will be considered in order to evaluate how child disabilities interact with other child characteristics in forming parents' values and parenting styles.

4. Mothers will report higher levels of controlling values and parenting practices than fathers across all groups of families.

Part 2: The Effects of Parental Values and Practices on Child Development

A. Parenting styles mediate the association between parental values and child adjustment. In order to test this hypothesis, four sets of relationships among the variables are examined:

1. Parental Values and Parenting Styles: Higher values related to control will be associated with higher levels of control-oriented parenting styles.

2. Parenting Styles and Child Adjustment:

a) Linear relationships: Higher levels of firm control will be associated with more competent child adjustment, whereas higher levels of power-oriented

control will be associated with less competent child adjustment. In addition, higher levels of family closeness will be related to more competent child behaviors.

b) Curvilinear relationship: Higher levels of firm control will be associated with greater child competence in an accelerated manner (stronger associations with child competence at higher levels of firm control), whereas mid-levels of power-oriented control will be related to optimal child competence.

3. Parental Values and Child Adjustment: Parental values will show similar relationships to child adjustment as parenting styles. Specifically, higher self-direction values and teacher role values will be related to greater child competence, whereas higher discipline role values will be related to less competent child adjustment.

4. Mediation: The effects of parental values on child adjustment will be mediated by parenting styles. Therefore, parental values will not add to the prediction of child adjustment after accounting for the effects of parenting styles.

In addition, across these analyses:

B. Mothers' values and parenting styles will be better predictors of child adjustment than those of fathers.

C. No differences in these relationships will be evident based on the child's disability status.

Part 3: The Effects of Parental Control Values on Perceptions of Parenting Success

1. Perceptions of parenting success will be determined by the "goodness of fit" between parents' control values and children's behavior. Therefore, less competent child

adjustment will be associated with lower perceptions of parenting success only when children's behavior violates parents' values.

2. More specifically, higher levels of behavior problems will be related to lower perceptions of parenting success for the parents who endorse high control values, but not for parents with lower control values. Similarly, lower levels of adaptive functioning will be associated with lower perceptions of success for parents with high self-direction values and high teacher role values only.

Chapter 2

METHODS

Subjects.

The subjects participated in a larger longitudinal study of family interactions and family functioning. The data used in the present study were collected as part of the third phase of the longitudinal study. Most of the families with children with mental retardation and typically developing children were completing a five year follow-up at Phase 3. The families with children with chronic illness and behavior problems were assessed for the first time at Phase 3. The subjects were recruited from medium-sized urban areas and rural areas within a 100 mile radius of a Midwestern university. Each family was paid $60 for their participation.

Mental Retardation. The families with children with mental retardation who participated in the two previous phases of data collection were re-contacted by letter and phone to participate in the five year follow-up. At Phase 1, 171 families with 6-18 year old children with mental retardation were recruited from Educable Mentally Impaired (EMI) and Trainable Mentally Impaired (TMI) classrooms. Of these families, 106 agreed to participate in the five year follow-up. Since the children with mental retardation from this initial sample were 11-23 years old at the five year follow-up, a subgroup of 29 replacement families with 6-10 year old mentally retarded children were recruited in order to represent the full age-range 6-18 for comparison purposes. These additional families were recruited with the same procedures as the initial sample. Thus, the combined sample of families with children with mental retardation at Phase 3 consisted of 135 families. Additional families were eliminated if the child with mental retardation was older than 18

years old or if the family was missing data on the central variables examined in this study, resulting in 91 families.

Finally, since the parents with children with mental retardation tended to be older than the parents in the other groups, an additional 15 families who were outliers in terms of parents' age were eliminated from the current sample in order to make the groups comparable. Thus, the final sample of families with children with mental retardation consisted of 76 families. A series of independent samples t-tests evaluated for differences between the 76 families included in the present study and the 15 families excluded from the present study in terms of parental values, parenting styles, perceptions of parenting success, and child adjustment. The results of these analyses revealed only one differences, in which the mothers of included in the present study reported higher discipline role values than the mothers excluded from the present study, $t(88)=-2.05$, $p<.05$.

Placement in special education classes requires evidence of impairment in intellectual functioning and adaptive behavior skills. Based on scores from intelligence tests administered by the schools (WISC-R and Stanford-Binet), 61 (80%) of the children obtained IQ scores in the 55-70 ranges and were enrolled in EMI classes, while 15 (20%) obtained IQ scores in the 40-54 range and were enrolled in TMI classes. These EMI and TMI classes correspond with DSM-IV criteria for mild and moderate mental retardation.

Behavior Problems. A sample of 64 families with children with behavior problems were recruited at Phase 3 of the longitudinal study. Two criteria were used for inclusion into the Behavior Problem group: 1) a score in the 93rd percentile or higher (T score >= 65) on the Achenbach Child Behavior Checklist (Achenbach, 1991) as reported by either parent or teacher and 2) a referral for educational or treatment services because of

behavior management problems, including parent-initiated referrals. Families were recruited from public school classrooms for children with emotional impairments and community agencies that treat children with behavior problems. Several of the families recruited for the behavior problem sample failed to meet the requirement of parent or teacher reported behavior problems over the 93rd percentile (N=16), and therefore these families were excluded from the present study. In addition, 7 families were excluded because they had incomplete data, and one family was excluded because they were an outlier in terms of parent education. The final sample consisted of 40 families with children with behavior problems. Of the 40 children, 23 had a diagnosis of Attention Deficit Disorder (ADD, N=14) or Attention Deficit Hyperactivity Disorder (ADHD, N=9). In addition, 23 children were labelled as either "emotionally impaired" or "behavior problems." These numbers sum to more than 40 because 6 children received both labels (ADD/ADHD and emotionally impaired).

Chronic Illness. A sample of 78 families with children with a chronic illness or physical handicap were also recruited at Phase 3. Compared to the total sample, 11 of these children were outliers in terms of children's age, and therefore were excluded from the current study, resulting in a sample size of 59. A series of independent samples t-tests evaluated for differences between the 59 families included in the present study and the 11 families excluded from the present study in terms of parental values, parenting styles, perceptions of parenting success, and child adjustment. The results of these analyses revealed only two differences for the fathers. The fathers who were included in the current study reported lower discipline role values and lower power-oriented control than the fathers who were excluded, $t(41)=2.21$, $p<.05$ and $t(40)=2.47$, $p<.05$ respectively.

Chronic illness was defined as any medical condition that is enduring, recurrent, and requires ongoing medical supervision or care, or any physical or sensory handicap which limits mobility and independent functioning, and requires special prosthetics or training (e.g., Gortmaker & Sappenfield, 1984). Subjects with concurrent intellectual impairments were excluded from the sample during the recruitment phase. The majority of these families were recruited through the Department of Public Health. Additional subjects were recruited by sending letters to all families with children enrolled in public school classrooms for children with physical health, or sensory impairments. Finally, local hospitals and community service agencies helped to recruit families. The primary medical diagnoses of the children in this group were as follows: 16 visual or hearing impairment, 15 asthma, 8 juvenile diabetes, 8 cerebral palsy, 5 physical abnormalities affecting mobility, 4 muscular dystrophy, 2 cleft lip palate, 2 congenital heart disease, 2 spina bifida, 1 chronic kidney disease, 1 chronic liver disease, 1 sickle cell anemia, 1 leukemia, 1 scoliosis, 1 spinal meningitis, 1 Graves disease, 1 Lowes syndrome, 1 hepatitis, 1 lung disease, 1 neurofibromatosis, and 1 bladder deformity. The number of diagnoses exceeds the number of subjects because 18 of the children had more than one medical diagnoses. In addition, 8 of the children were also diagnosed with Attention Deficit Hyperactivity Disorder.

Sixty three percent of the children in the chronic illness sample had a condition that involved a physical impairment, and 55% were enrolled in physical or occupational therapy or special classes for their illness at the time of the study. In addition, 18% of the sample had been hospitalized in the past year, and all but one of the children had symptoms present at the time of the study. In general, the disabilities in this sample tended

to be chronic, but not acute.

Typically developing children. Comparison families with typically developing children who participated in the initial study were re-contacted by letter and phone to participate in the five year follow-up. At Phase 1, 52 families with 6-18 year old typically developing children were recruited through newspaper advertisements. Of these families, 25 agreed to participated in the follow-up. At Phase 3, an additional 35 families with typically developing children were recruited. Data for the combined sample of 60 families were screened to ensure that the target children were in regular education classes and that they did not have behavior problems (as indexed by elevated scores on the Child Behavior Checklist). Nine of the families were eliminated from the current sample because the mothers reported T-scores above the 93rd percentile on the Child Behavior Checklist. In addition, two families were outliers in terms of parent education and were excluded from the current study. The final sample of typically developing children consisted of 41 families.

Sample Characteristics.

In total, 216 families were included in the study. One-way ANOVAs were conducted to evaluate group differences in demographic characteristics for the final sample. The means and standard deviations and frequencies for each group are presented in Table 1 for the parents' characteristics. There were no differences in the fathers' age, $F(3,151)=1.20$, p=ns, the mothers' age, $F(3,209)=1.45$, p=ns, the fathers' education, $F(3,149)=1.88$, p=ns, the mothers' education, $F(3,207)=1.07$, p=ns, or yearly family income, $F(3,200)=1.19$, p=ns. For the entire sample, the mean age of the fathers was 40.66 (SD=6.75), range 29-58, and the mean age of the mothers was 37.61 (SD=5.97),

range 25-54. The mean number of years of education was 13.98 (SD=2.23) range 9-19 for the fathers and 13.74 (SD=2.14) range 8-20 for the mothers. The mean yearly family income was $34,074 (SD=$28,413), range=$3,000-$180,000. In addition, chi square analyses revealed no differences across family groups for the number of married versus single parents, or for the percentage of ethnic minority families. For the entire sample, there were 132 married couples and 84 single parents (primarily mothers). Twenty percent of the sample were ethnic minorities. Specifically, 29 mothers and 11 father were African-American, 8 mothers and 3 fathers were Asian, 1 father was Latino, and 4 mothers and 3 fathers were Native American.

The frequencies of child gender and child age group within each group of families are presented in Table 2. The frequency of behavior problems within each group of families, defined by a score greater than the 93rd percentile on the Child Behavior Checklist Total Problem Score, is also presented in the table. The mean age for the target child across the entire sample was 11.74 (SD=2.95) years, range 6-18 years. A one-way ANOVA confirmed the absence of differences in the target children's ages across family groups, $F(3,212)=1.91$, p=ns. In addition, chi square analyses revealed no differences across family groups for child gender or child age group (6-12 versus 13-18 years old). For the entire sample, there were 109 boys and 107 girls, 126 children aged 6-12 years and 90 children aged 13-18 years, and 129 children without behavior problems and 87 children with behavior problems.

Procedure.

Each family participated in two sessions of data collection that lasted approximately two hours and were scheduled one week apart. All family members were

requested to be present for both sessions. During the first session, the purposes and procedures of the study were explained and family members completed a battery of questionnaires measuring parenting cognitions, family functioning and relationships, child adjustment, marital functioning, psychological distress, social support, and sibling relationships. In addition, the parents completed a 10 minute marital problem solving discussion. Some questionnaires were completed by the parents in the week between sessions. During the second session, family members finished any incomplete questionnaires and the family was videotaped during a 10 minute family problem solving discussion and a 50 minute unstructured family interaction. Only questionnaire data are included in the present study.

Instruments

Measures of Parental Values.

Self-direction vs. Conformity Values. Parents' childrearing values were measured with Schaefer and Edgerton's revision of Kohn's Value Scale (Schaefer & Edgerton, 1985; see Appendix A). The scale consists of fifteen values, six indicating conformity values (e.g., "to keep himself and his clothes clean"), six indicating self-direction values (e.g., "to think for himself"), and three indicating social values (e.g., "to be kind to other children"). These fifteen values are separated into three sets of five values; each set contains two conformity values, two self-direction values, and one social value. For each set, parents rank order their value preferences from 1 ("the most important thing you want your child to learn") to 5 ("the least important"). For the present study, a conformity score was calculated by summing the conformity items and a self-direction score was calculated by summing the self-direction items. Scores on each scale could range from 9 to 27. In

order to aid interpretation, that scores were reflected so that higher scores indicated a higher value placed on that quality. Schaefer and Edgerton (1985) reported test-retest correlations over a four month period of r=.79 for conformity values and r=.64 for self-direction values. Because of the ipsative nature of this scale, conformity and self-direction scores were highly correlated (r=-.86 for the fathers and r=-.84 for the mothers). Therefore, a single measure of self-direction vs. conformity values was calculated by subtracting conformity scores from self-direction scores, and adding a constant so that all scores were greater than zero. Scores on this variable could range from 0 to 36, with higher scores associated with higher self-direction values and lower conformity values. This new index of childrearing values correlated highly with the original measures of self-direction (r=.97 for the fathers and r=.96 for the mothers) and conformity (r=-.96 for the fathers and r=-.96 for the mothers) values.

Insert Table 3 here

Parenting Role Values. Parents' role values were measured with a modification of Segal's (1985) Role Disposition Questionnaire. The Role Disposition Questionnaire is a 24-item scale with a 5-point Likert format, ranging from "strongly disagree" (1) to "strongly agree" (5). The items assess parents' beliefs about their primary responsibilities as parents, as disciplinarians and/or as teachers. The authors submitted these 24 items to a factor analysis and found that 10 items loaded on a single factor (alpha= .79) (Rebman, 1982). The items on this factor contained both "disciplinarian" and "teacher" items loading in opposite directions, indicating that these two parenting responsibilities were

mutually exclusive rather than orthogonal. In the current sample, however, this 10-item scale had low reliability (alpha=.50) and preliminary analyses indicated that the parent-as-disciplinarian and parent-as-teacher items were largely uncorrelated (correlations ranging from .03 to -.16). Therefore, the original 24 items were submitted to a principal components factor analyses (varimax rotation). Data for both mothers and fathers were used in this analysis, resulting in 456 subjects. The 24 items formed four significant factors (eigenvalues > 1.00). Consistent with the recommendations of Tabachnick & Fidell (1989), only items with factor loadings greater than .45 were used to calculate factor scores (at least 20% overlapping variance). The first factor, Discipline (eigenvalue=3.14), assessed parents valuation of their role as enforcers of strict obedience, and five items showed factor loadings greater than .45 (range .56-.71). The second factor, Teacher (eigenvalue=2.45), assessed parents' valuation of their role as educators of their children at home, and five items showed factor loadings greater than .45 (range: .56-.67). These items and their factor loadings are presented in Table 3 (see Appendix A for the original 24-item questionnaire). Factor scores were calculated for the mothers and the fathers separately by summing the five items per factor. Further analysis yielded alpha reliability coefficients for these two factors of .70 for the Disciplinarian scale and .64 for the Teacher scale. Consistent with the idea that these two role dispositions are orthogonal constructs, the disciplinarian and teacher factor scores were unrelated for both the fathers (r=.02) and the mothers (r=-.03). Scores on each scale could range from 5 to 25, with higher scores indicating relatively high role values in each domain.

Measures of Parenting Styles

Family Closeness. Family Closeness was measured with the Relationship Dimension of the Family Environment Scale (see Appendix B for all parenting styles scales). The Family Environment Scale (FES; Moos & Moos, 1981) consists of 90 true-false statements which comprise 10 scales. These scales assess the quality of family relationships, attitudes regarding achievement, cultural pursuits and recreation, and family structure and maintenance. The FES is a widely used instrument with good reliability and validity (e.g., Boake & Salmon, 1983; Robertson & Hyde, 1982). The Relationship Dimension combines three factors from the FES: Cohesion + Expressiveness - Conflict. The Cohesion scale measures feelings of family unity and belonging (e.g., "Family members really help and support one another."). Similarly, the Expressiveness scale measures the extent to which family members feel safe to express their feelings openly (e.g., "We tell each other our personal problems in our family."). The Conflict scale measures the degree of hostility and disagreement in the family (e.g., "We fight a lot in our family."). Higher scores indicate relatively more closeness, warmth, and sense of belonging, and relatively less hostility. Scores on this dimension ranged from 0 to 24.

Firm Control. A measure of firm control was derived by combining scales from two family questionnaires: the Systems Maintenance Dimension (Organization + Control) of the FES and the Laissez-Faire parenting scale from the Family Activities and Relationships Questionnaire. The Family Activities and Relationship Questionnaire (FARQ; Bloom, 1985) consists of 40 items regarding family functioning. These 40 items factor into 8 scales measuring different types of family styles. Items are rated on a 4 point

scale from very untrue for my family (1) to very true for my family (4). The FARQ has been found to be a valid measure of family life when the individual is the unit of analysis (Bloom, 1985) as well as when the family is the unit of analysis (Benson, Curtner-Smith, Collins, & Keith, 1995). The Systems Maintenance Dimension measures the degree of structure, rules, and routines in the family (e.g., "There are set ways of doing things in our family" and "There is a strong emphasis on following rules in our family."). The Laissez-Faire scale measures the extent to which structure and rules are absent in the family (e.g., "It is unclear what will happen when rules are broken in our family."). Thus, the Systems Maintenance Dimension and the Laissez-Faire scales assess opposite ends of the continuum from clear structure to lax rule and discipline. Furthermore, the Systems Maintenance Dimension and Laissez-Faire scales were correlated, $r=-.33$, $p<.000$ for fathers and $r=-.23$, $p<.001$ for mothers. Therefore, a score for Firm Control was calculated by subtracting the Laissez-Faire scale from the Systems Maintenance Dimension. After adding a constant term so that all scores were greater than zero, scores for Firm Control ranged from 0 to 21.

Power-Oriented Control. The measure of power-oriented control consisted of the Authoritarian scale of the FARQ. The Authoritarian scale measures the extent to which parents rely on their greater power and authority in making and enforcing family rules (e.g., "There is strict punishment for breaking rules in our family."). Scores on this scale ranged from 5 to 18, with higher scores indicating greater reliance on parental dominance and strict punishment for exercising parental control.

In order to further clarify the distinction between firm control and power-oriented control, Table 4 presents a comparison of the types of items included on each scale. In

addition, Table 4 presents sample items from the scales assessing parental values in order to clarify the distinction between parental values and parenting styles.

Insert Table 4 here

Measures of Child Adjustment

Behavior Problems. Externalizing behavior problems were measured with the normalized T-scores for Externalizing Behavior Problems on the Child Behavior Checklist (Achenbach, 1991). This scale was almost always completed by the mothers. The externalizing scale consists of 33 items that parents rate on a 3-point scale, not true (0), somewhat or sometimes true (1), or very true of often true (2). On the Externalizing factor, 20 items assess aggressive behaviors (e.g., "gets in many fights") and 13 items assess delinquent behaviors (e.g., "lies, cheats"). The Child Behavior Checklist is a widely used measure of behavioral and emotional problems in children and has excellent test-retest reliability, and good concurrent and predictive validity (Achenbach, 1991). In the current sample, Externalizing T-scores ranged from 30 to 91.

Adaptive Behavior. Two indices were used to measure adaptive functioning, both derived from the Adaptive Behavior Scale (ABS; Nihira, Foster, Shellhaas, & Leland, 1974; see Appendix C). This scale was completed by the mother in the majority of families. These measures were not administered to the typically developing children. The ABS is a widely used measure of child functioning in samples of children with mental retardation and has adequate reliability and validity (e.g., Nihira, 1976). Both measures of adaptive behavior skills were applicable to all children, not just children with mental

retardation. Self-Direction. The Self-Direction scale of the ABS assesses the extent to which children show initiative, perseverance, and independent use of leisure time (e.g., "initiates most of own activities"). Self-Direction scores ranged from 1 to 20. Social Responsibility. The measure of social competence combines two scales from the ABS, Responsibility and Socialization (r=.64). Items on these scales assess children's dependability, responsibility for personal belongings, cooperation, consideration, and social maturity (e.g., "is willing to help if asked" and "initiates group activities"). Social Responsibility score ranged from 9 to 32.

Measures of Parenting Success

Parents' perceptions of responsibility and control were measured by two subscales of the Parental Locus of Control Scale (Campis, Lyman, & Prentice-Dunn, 1986). This scale is comprised of 47 items presented in a 5-point Likert format, ranging from strongly disagree (1) to strongly agree (5). Campis et al. (1986) report good internal consistency for the scale (alpha=.92) and construct validity, and Roberts, Joe, & Rowe-Hallbert (1992) report good test-retest reliability (r=.83). Two factors from this scale are included in the present study: Self-Blame/ Responsibility (10 items) and Parental Control of Child's Behavior (10 items). Factor scores were calculated by reverse scoring items that had negative factor loadings, and summing the respective items (see Appendix D).

Self-Blame/ Responsibility assesses the degree to which parents feel responsible for child behavior, with high scores indicating relatively greater self-blame (e.g., "My child's behavior problems are no one's fault but my own"). Perceived Control assesses parents' sense of competency at controlling their child's behavior, with higher scores indicating relatively greater perceptions of control (e.g., "I always feel in control when it

comes to my child's behavior"). Campis et al. (1986) present reliability data for these factors (alpha=.77 for Self-Blame/ Responsibility and alpha=.65 for Perceived Control). However, since all of the subjects in their study were under twelve years old, the reliability of these scales was assessed in the present sample of children 6-18 years old. In the current sample, both scales showed adequate reliability across this wider age range. Specifically, for Self-Blame/ Responsibility, alpha=.78 for the fathers and .80 for the mothers, and for Perceived Control, alpha= .62 for the fathers and .65 for the mothers. Self-Blame/Responsibility scores ranged from 10 to 50, and Perceived Control scores ranged from 17 to 47.

Insert Table 5 here

Mother - Father Correlations

The correlations between the mothers and the fathers reports of values, parenting styles, and perceptions of parenting success are presented in Table 5 for the entire sample, the parents of children with mental retardation only, and the parents without children with mental retardation only. As shown in Table 5, the mothers and the fathers' reports were significantly correlated across variables. However, since the correlations were moderate in magnitude (range for the entire sample: .19-.58), mothers and fathers' reports are not completely redundant of one another. Therefore, mothers and fathers data are evaluated separately. In addition, the strength of the correlation between mothers and fathers varies depending on the presence of a child with mental retardation. For instance, as shown in Table 5, self-direction values are highly correlated for the parents of children without

mental retardation, but are uncorrelated for the parents with children with mental retardation. The reverse pattern is evident for power-oriented control and, to a lesser extent, teacher role values. These difference provide further support for evaluating mothers and fathers separately.

Operationalization of Hypotheses

These operational definitions correspond to the hypotheses presented at the end of Chapter 1.

Part 1 The Effects of Child Group on Parental Values and Practices

Variable	Family Group Effect	Parent Effect
Self-direction Values	comparisons > MR, BP	Father > Mother
Disciplinarian Role Values	MR, BP > comparisons	Mother > Father
Teacher Role Values	MR, BP > comparisons	Mother > Father
Firm Control	MR, BP > comparisons	Mother > Father
Power-Oriented Control	MR, BP > comparisons	Mother > Father
Family Closeness	comparisons > MR, BP	Mother > Father

Part 2 The Effects of Parental Values and Practices on Child Development

1. Parental Values predicting Parenting Styles

Predictors: Values	Predicted: Parenting Styles
↓ self-direction values ↑ discipline role values ↑ teacher role values	↑ firm control, ↑ power-oriented control

↑ self-direction values
↓ discipline role values ↑ family closeness
↑ teacher role values

2. Parenting Styles predicting Child Adjustment

a) Linear relationships

Predictors: Parenting Styles	Predicted: Child Adjustment
↓ firm control ↑ power-oriented control ↓ family closeness	↑ externalizing behavior problems
↑ firm control ↓ power-oriented control ↑ family closeness	↑ adaptive functioning

b) Curvilinear relationships

1. Firm control:

    a) The negative correlation between firm control and behavior problems will be especially strong at the lower end of the firm control continuum.

    b) The positive correlation between firm control and adaptive behavior skills will be especially strong at the higher end of the firm control continuum.

2. Power-Oriented Control:

    a) Mid-levels of power-oriented control will be associated with the lowest levels of children's externalizing behavior problems.

    b) Mid-levels of power-oriented control will be associated with the highest levels of children's adaptive behavior skills.

C. Parents' control values predicting Child Adjustment

Predictors: Values	Predicted: Child Adjustment
↓ self-direction values ↑ discipline role values ↓ teacher role values	↑ externalizing behavior problems
↑ self-direction values ↓ discipline role values ↑ teacher role values	↑ adaptive functioning

D. Parents' values will not add to the prediction of child adjustment after accounting for the variance in child adjustment associated with parenting styles.

Part 3 The Effects of Parental Control Values on Perceptions of Parenting Success

Predictor: Child Adjustment	Predicted: Perceptions of Parenting Success	Moderator: Only When Values=
↑ Externalizing Problems	↑ Self-Blame ↓ Perceived Control	↓ Self-Direction ↑ Discipline Role ↑ Teacher Role
↓ Adaptive Functioning	↑ Self-Blame ↓ Perceived Control	↑ Self-Direction ↑ Teacher Role

Chapter 3

RESULTS

The Effects of Child Group on Parental Values and Practices

A series of analyses were conducted to evaluate Family Group differences (Mental Retardation, Comparison, Behavior Problem, Chronic Illness) in parenting values and parenting styles. The first set of analyses tested the hypothesis that the parents with children with mental retardation and children with behavior problems would show higher control values (lower self-direction values and higher valuation of disciplinarian and teacher roles) and higher levels of controlling parenting styles (more firm control and power-oriented control) than the other parents in the two comparison groups. In addition, the parents of children with mental retardation and behavior problems were expected to report less family closeness than the other parents. For both the fathers and the mothers, values and parenting styles were entered into a 4 (Family Group) X 2 (Child Gender) X 2 (Child Age Group 6-12, 13-18) MANOVA. Significant effects were followed up with post hoc comparisons between the mental retardation and behavior problem parents and the two comparisons groups. The means and standard deviations for the six dependent variables and the results of the post hoc analyses are presented in Table 6 for the fathers and Table 7 for the mothers.

Insert Table 6 here

Fathers. The three-way MANOVA for the fathers demonstrated a significant multivariate effect for Family Group, $F(3,103)=1.84$, $p<.05$. The main effects for Child Gender and Child Age Group and all interaction effects were nonsignificant. The significant multivariate Family Group effect was accounted for by significant univariate effects for three of the six dependent variables, Self-Direction Values, $F(3,103)=4.20$, $p<.01$, Teacher Roles, $F(3,103)=3.31$, $p<.05$, and Family Closeness, $F(3,103)=2.80$, $p<.05$. Post hoc contrasts revealed that, as expected, the fathers of children with mental retardation valued self-direction less than the two groups of comparison fathers (see Table 6). However, contrary to expectations, the fathers with children with mental retardation showed lower teacher role values than the two groups of comparison fathers. Finally, consistent with expectations, the behavior problem fathers reported less family closeness than the fathers in the two comparison groups. Thus, the results provided only partial support for expected differences between the groups of fathers in terms of control values and controlling parenting styles. For the MR fathers, although they reported lower self-direction values than the comparison fathers, as expected, other variables either did not differ from comparison groups, or in the case of teacher roles, were opposite expectations. Similarly, for the BP fathers, the only significant difference was lower levels of family closeness compared to the comparison fathers.

Insert Table 7 here

Mothers. The three-way MANOVA for the mothers demonstrated significant multivariate effects for Family Group, $F(3,183) = 1.78$, $p < .05$, Child Age Group, $F(1,183) = 3.51$, $p < .001$, and the Child Age X Family Group interaction, $F(3,183) = 1.76$, $p < .05$. There was no main effect for Child Gender and no significant interaction terms involving Child Gender. The main effect for Family Group was accounted for by significant univariate effects for Teacher Role, $F(3,183) = 3.36$, $p < .05$ and Family Closeness, $F(3,183) = 3.78$, $p < .01$. As shown in Table 5, contrary to expectations, the MR mothers showed lower teacher role values than the chronic illness mothers. However, consistent with expectations, the behavior problem mothers showed higher teacher role values than the comparison mothers. In addition, as expected, the behavior problem mothers reported less family closeness than the two comparison groups of mothers.

In addition to these Family group differences, there were main effects for Child Age and Child Age X Family Group interactions for three variables, Self-Direction Values, Discipline Role Values, and Firm Control. Since all three of the dependent variables showing significant main effects for Child Age were also involved in the Child Age X Family Group interactions, only the interactions are interpreted, Self-Direction Values, $F(3,183) = 3.14$, $p < .05$, Discipline Role Values, $F(3,183) = 2.58$, $p < .05$, and Firm Control, $F(3,183) = 2.54$, $p < .05$. Post hoc analyses revealed that the family group hypotheses were supported for the mothers of older children, but not for the mothers of younger children (see Table 7). Specifically, for the mothers of children 13-18 years old, the MR mothers, $M = 21.43$, $SD = 7.55$, reported lower self-direction values than the comparison mothers, $M = 27.00$, $SD = 6.10$. In addition, for the mothers with older children, the MR mothers, $M = 13.09$, $SD = 4.20$ and the behavior problem mothers, $M = 14.77$, $SD = 4.75$ both reported

higher discipline role values than the comparison mothers, M=9.47, SD=2.61. Finally, the MR mothers of older children, M=13.49, SD=3.61, reported more firm control than the comparison mothers of older children, M=10.64, SD=3.89. The only significant group difference for the mothers of 6-12 year old children was contrary to the hypotheses. Specifically, the behavior problem mothers, M=23.25, SD=6.99, reported higher self-direction values than the comparison mothers, M=18.35, SD=6.02.

Thus, overall, the hypothesis that the MR mothers and the BP mothers would show higher control values and controlling parenting styles received partial support. Expected group differences were obtained on two variables, and on three other variables only for the mothers with older children.

Mother-Father Contrasts

In order to test the hypothesis that mothers would report higher control values, higher levels of controlling parenting styles, and more family closeness than fathers, the mothers' and fathers' values and parenting styles were entered into a Family Group (MR, Comp, BP, CI) X Parent (mother, father) X Child Age (6-12, 13-18) X Child Gender (boy, girl) repeated measures MANOVA. The results relevant to the within-subjects Parent effects are presented in Table 6.

Insert Table 8 here

The results revealed a significant multivariate Parent effect, F(1,109)=3.89, p<.001 and a significant Parent X Child Gender effect, F(1,109)=2.35, p<.05. The multivariate Parent effect was accounted for by significant univariate effects for four of the six

dependent variables, Teacher Role, $F(1,109)=6.97$, $p<.01$, Firm Control, $F(1,109)=5.55$, $p<.01$, Power-Oriented Control, $F(1,109)=6.73$, $p<.01$, and Family Closeness, $F(1,109)=9.58$, $p<.001$. As shown in Table 6, consistent with the hypotheses, the mothers reported higher teacher role values, more firm control, and more family closeness than the fathers. Contrary to expectations, the fathers reported more power-oriented control than mothers. However, this effect was qualified by a significant Parent X Gender interaction, $F(1,109)=8.23$, $p<.01$. Post hoc contrasts revealed that these differences were accounted for by the parents of girls only, where the fathers of girls $M=11.73$, $SD=1.72$ reported more power-oriented control than the mothers of girls $M=10.96$, $SD=1.88$.

Thus, the results generally supported the hypotheses regarding mother-father differences. Also, it is interesting that these findings were evident regardless of the child's disability status, since there were no interactions with Family Group.

The Effects of Parental Values and Practices on Child Development

A series of regression analyses were conducted to examine the implications of parenting values and parenting styles for children's development. These analyses were designed to test the hypothesis that parenting styles mediate the association between parents' values and children's adjustment after controlling for parents' level of education. Thus, the analyses evaluate 1) the relationship between parenting values and parenting styles, 2) the relationship of parenting styles to child adjustment, 3) whether parents' values show similar relationships to child adjustment as parenting styles, and 4) whether parents' values add to the prediction of child adjustment after accounting for the effects of parenting styles.

Parents' Control Values and Parenting Styles

First, a series of hierarchical multiple regressions tested the hypothesis that parents' values would predict their parenting styles. Specifically, it was expected that lower self-direction values, higher discipline role values, and higher teacher role values would predict higher levels of firm control and power-oriented control. In addition, it was expected that higher self-direction values, lower discipline role values, and higher teacher role values would predict higher levels of family closeness. In Step 1, demographic variables (parent education, child gender, and child age group) and an MR family group dummy variable (coded 1 for MR families and 0 for all other families) were entered. In Step 2, the three parenting values were entered. In Step 3, stepwise entry was used to evaluate the interactions between parental values and child gender, child age, and family group. Significant interactions were followed up by calculating the correlations between the parental value and the criterion at each level of the demographic variable. There were two levels to each of the demographic variables, boys vs. girls, 6-12 year old vs. 13-18 year old, and MR family group vs. non-MR family group. The zero-order correlations between values and parenting styles are presented in Table 9. The results of the regressions are presented in Table 10 for the fathers and Table 11 for the mothers. These tables present the R^2, the change in R^2 associated with each step, the partial correlations between the predictors and the criterion at each step, and the F-ratios associated with each regression model.

Insert Tables 9, 10, and 11 here

Firm Control. For the fathers, as shown in Table 9, more firm control was only significantly correlated with lower self-direction values. However, as shown in Table 10, after controlling for demographic variables, both self-direction values and discipline role values significantly predicted firm control, and together they added 8% to the predicted variance. Consistent with expectations, lower self-direction values and higher discipline role values were associated with more firm control. Additionally, although teacher role values had no significant main effect, it did interact with child age in predicting firm control. Post hoc analyses revealed that consistent with expectations, higher teacher role values were associated with more firm control for the fathers of older children, $r=.32$, $p<.05$, but not for the fathers of younger children, $r=-.13$, p=ns.

For the mothers, as shown in Table 9, none of the parental values were significantly correlated with firm control. However, as shown in Table 11, after controlling for demographic variables, self-direction values significantly predicted firm control. Consistent with expectations, lower self-direction values were associated with more firm control.

Power-Oriented Control. For the fathers, as shown in Table 9, power-oriented control was not significantly correlated with any of the parental values, and as shown in Table 10, after controlling for demographic variables, there were no significant main effects for parents' values in predicting power-oriented control. However, there were two significant interactions between the demographic variables and parental values, adding 11% to the predicted variance. First, contrary to expectations, higher self-direction values were associated with more power-oriented control for the MR fathers, $r=.29$, $p<.05$, but not for the non-MR fathers, $r=-.18$, p=ns. The second interaction term revealed that

consistent with expectations, higher discipline values were associated with more power-oriented control for the fathers of girls, $r=.24$, $p<.05$, but not the fathers of boys, $r=-.19$, p=ns.

For the mothers, as shown in Table 9, more power-oriented control was only significantly correlated with higher discipline role values, and this relationship remained after controlling for demographic variables (see Table 11). Additionally, although teacher role values had no significant main effect, it did interact with MR family group in predicting power-oriented control. Post hoc analyses suggested that higher teacher values may be associated with more power-oriented control for MR mothers but not for non-MR mothers, although these relationships did not reach significance ($r=.10$, p=ns for the MR mothers and $r=.03$, p=ns for the non-MR mothers).

Family Closeness. For the fathers, as shown in Table 9, more family closeness was only significantly correlated with higher teacher role values, and this effect remained after controlling for the demographic variables (see Table 10). As expected, higher levels of family closeness were predicted by higher teacher role values.

For the mothers, more family closeness was significantly correlated with both higher self-direction values and lower discipline role values (see Table 9). However, as shown in Table 11, after controlling for demographic variables, there were no main effects for self-direction values or discipline role values in predicting family closeness. Instead, higher teacher role values were associated with more family closeness. Additionally, self-direction values interacted with child age in predicting family closeness. Post hoc analyses revealed that, as expected, higher self-direction values were associated with more family closeness for the mothers of adolescents, $r=.36$, $p<.001$, but not for the mothers of

younger children, r=.03, p=ns.

In summary, the results showed several similarities between the mothers and the fathers that were consistent with the hypotheses. Specifically, for the mothers and the fathers, higher self-direction values were associated with less firm control, higher discipline role values were associated with more power-oriented control for all parent-child dyads expect the fathers of boys, and higher teacher role values were associated with more family closeness.

Parenting Styles and Child Adjustment

The next set of analyses tested the hypotheses that parenting styles would predict the three indices of child adjustment: externalizing behavior problems, self-direction skills, and social responsibility skills. For the latter two outcomes, data were not available for the typically developing children. It was hypothesized that less firm control, more power-oriented control, and less family closeness would be associated with higher levels of externalizing behavior problems. In contrast, more firm control, less power-oriented control, and more family closeness were expected to be associated with higher levels of adaptive functioning. In addition to evaluating these linear relationships, these analyses tested the hypothesis that the relationship between controlling parenting styles and child adjustment is curvilinear. In particular, it was hypothesized that firm control would show stronger negative associations with children's behavior problems at increasingly lower levels of firm control and stronger positive associations with children's adaptive behavior skills at increasingly higher levels of firm control. In addition, power-oriented control was expected to show U-shaped relationships, in that middle levels of power-oriented control would be associated with the lowest levels of children's externalizing behavior problems

and the highest levels of children's adaptive behavior skills.

Hierarchical multiple regressions were used to test these hypotheses. Aiken and West (1991) demonstrate that when interactions between two continuous variables are included in a regression model, the variables need to be standardized before calculating the interaction terms. The standardized main effects should be entered for the linear terms and the cross product of the standardized main effects should be entered into the regression equation for the higher order terms. Failure to do so results in 1) inaccurate beta coefficients for the linear effects, and 2) problems with multicolinearity between the linear effects and the higher order terms. In order to assess for curvilinear relationships for the two types of control, the standardized control variables were squared (Aiken & West, 1991; Kurdek & Fine, 1994).

The overall strategy for these analyses was to enter child gender, child age, and MR family group in Step 1, the linear parenting styles in Step 2, and the squared firm control and power-oriented control terms in Step 3. As in the previous analyses, the interactions between parenting styles and child gender, child age, and MR family group were evaluated for entry in a stepwise manner in Step 4 and significant interactions were followed up by calculating the correlations between the parenting style and the criterion at each level of the demographic variable. Preliminary analyses tested for possible interactions between family closeness and the two types of control-oriented parenting styles in predicting children's adjustment. These analyses tested the hypothesis that the effects of firm control or power-oriented control on children's adjustment may depend on levels of family closeness. For instance, firm control may show positive effects on children's adjustment only when exercised in the context of a high level of family

closeness. Similarly, power-oriented control may only be detrimental to children's adjustment when exercised in the absence of family closeness. However, the results of these analyses revealed no significant interaction effects, and these interaction terms were eliminated from the current regression analyses in order to maintain an acceptable subject to variable ratio.

The zero-order correlations between parenting styles and child adjustment are presented in the top half of Table 12. The results of the regression analyses are presented in Table 13 for the fathers and Table 14 for the mothers. The tables present the R^2, the change in R^2 at each step, the B coefficient associated with each predictor at the final step in the regression, and the F-ratios for each regression model. According to Aiken and West (1991), when variables are standardized, the beta coefficients are inappropriate indices of relationships, and the B coefficients should be presented instead. The B coefficients at the final step in the regression give measures of the direct effects of each predictor on the criterion when all other variables are included in the model (e.g., Cohen & Cohen, 1983).

Insert Tables 12, 13 and 14 here

Externalizing Behavior Problems. For the fathers, as shown in Table 12, higher levels of externalizing behavior problems were only significantly correlated with lower levels of family closeness. Similarly, after controlling for demographic variables, less family closeness was associated with higher levels of externalizing behavior problems, adding 13% to the predicted variance (see Table 11). However, a significant interaction

between family closeness and child gender qualified this finding. Post hoc analyses revealed that higher levels of family closeness reported by fathers were associated with lower levels of behavior problems for boys, $r=-.69$, $p<.001$, but were unrelated for girls, $r=.13$, $p=ns$.

For the mothers, as shown in Table 12, higher levels of externalizing behavior problems were significantly correlated with both lower levels of firm control and lower levels of family closeness. However, as shown in Table 14, after controlling for demographic variables, only lower levels of family closeness were associated with higher levels of externalizing behavior problems. However, this effect was qualified by a significant interaction between family closeness and MR family group. Post hoc tests revealed that more family closeness reported by the non-MR mothers was associated with lower levels of behavior problems for the non-MR children, $r=-.45$, $p<.001$, but there was no significant relationship in the MR families, $r=-.18$, $p=ns$.

Self-Direction Skills. For the fathers, as shown in Table 12, children's self-direction skills were not significantly correlated with any of the parenting styles. However, after controlling for demographic variables, as shown in Table 13, higher levels of family closeness were associated with higher levels of self-direction skills. However, a significant interaction between family closeness and child gender revealed that more family closeness reported by fathers was related to higher self-direction skills for boys, $r=.35$, $p<.05$, but not for girls, $r=.01$, $p=ns$. In addition, there was a significant quadratic effect for firm control, adding 7% to the predicted variance. Following Kurdek and Fine (1994), to identify the nature of the nonlinear relationship between firm control and self-direction skills, the quartiles for the linear firm control term were identified, and the means for self-

direction skills at each quartile were computed. These points are plotted in Figure 2. Consistent with expectations, higher levels of firm control were associated with higher levels of self-direction skills in an accelerated manner. That is, low and mid-levels of firm control showed no effect on self-direction skills, whereas at the highest levels of firm control, more firm control was associated with higher self-direction skills.

For the mothers, as shown in Table 12, self-direction skills were significantly correlated with higher levels of power-oriented control and higher levels of family closeness. As shown in Table 14, after controlling for demographic variables, there were no linear main effects for any of the parenting styles variables in predicting self-direction skills, but there was a significant quadratic effect for power-oriented control. As before, the quartiles for the linear power-oriented control term were identified, and the means for self-direction skills at each quartile were computed. These points are plotted in Figure 3. Consistent with expectations, the results revealed an inverted U-shaped curve in which mid-levels of power-oriented control were associated with the highest levels of self-direction skills.

Social Responsibility. For the fathers, as shown in Table 12, children's social responsibility skills were not significantly correlated with any of the parenting styles variables. However, after controlling for demographic variables, consistent with the hypotheses, higher levels of firm control and lower levels of power-oriented control were associated with higher levels of social responsibility (see Table 13). However, the effect of power-oriented control on social responsibility skills was qualified by a significant interaction between power-oriented control and MR family group. Post hoc analyses revealed that more power-oriented control for the non-MR fathers was associated with

lower social responsibility skills, $r=-.28$, $p<.05$, and there was a trend in the opposite direction for the MR fathers, $r=.17$, $p=ns$.

For the mothers, as shown in Table 12, social responsibility skills were not correlated with any of the parenting styles variables. Similarly, as shown in Table 14, after controlling for demographic variables, there were no main effects for the parenting styles variables in predicting social responsibility. However, there was an interaction between power-oriented control and MR family group. Post hoc analyses showed that higher levels of power-oriented control for the MR mothers were related to higher levels of social responsibility skills, whereas higher levels of power-oriented control for the non-MR mothers were associated with lower levels of social responsibility skills. However, neither of these relationships were significant, $r=.14$, $p=ns$ for the MR mothers, and $r=-.10$, $p=ns$ for the non-MR mothers.

In summary, several findings supported the hypothesized relationships between parenting styles and child adjustment. In addition, there seemed to be a consistent pattern across the results for the fathers and the mothers. In particular, levels of family closeness were associated with children's externalizing behavior problems, as expected, but levels of parental control were not. In contrast, levels of parental control were associated with children's self-direction skills and social responsibility skills, as expected, but levels of family closeness were not. Finally, the hypothesis that the relationship between parental control styles and children's adjustment would be nonlinear was supported for both the mothers and the fathers in the prediction of self-direction skills.

Parenting Values and Child Adjustment

A series of hierarchical multiple regressions tested the hypothesis that parents'

control values would predict child adjustment in a way that is similar to the predictions from parenting styles. In particular, it was expected that lower self-direction values, higher discipline role values, and lower teacher role values would be associated with higher levels of externalizing behavior problems. In addition, higher self-direction values, lower discipline role values, and higher teacher role values would be associated with higher levels of adaptive functioning. Similar to the previous analyses, demographic variables were entered in Step 1, parenting values were entered in Step 2, and interaction terms were evaluated for entry in Step 3. Significant interactions were followed up as in the previous analyses. The zero-order correlations are presented in the bottom half of Table 12. The regression results are presented in Table 15 for the fathers and Table 16 for the mothers. The tables present the R^2, the change in R^2 at each step, the partial correlations between parents' values and child adjustment, and the F-ratios associated with each regression model.

Insert Table 15 and 16 here

Externalizing Behavior Problems. For the fathers, as shown in Table 12, externalizing behavior problems were not significantly correlated with any of the measures of parental values. Similarly, after controlling for the demographic variables, as shown in Table 15, there were no main effects for parental values in predicting externalizing behavior problems. However, there was a significant interaction between discipline role values and child gender. As expected, higher discipline role values reported by fathers were associated with higher levels of externalizing behavior problems for boys, $r=.36$,

$p<.01$, but not for girls, $r=-.13$, $p=ns$.

For the mothers, as shown in Table 12, higher levels of externalizing behavior problems were only significantly correlated with higher discipline role values. However, after controlling for demographic variables, as shown in Table 16, although discipline role values were no longer associated with externalizing behavior problems, teacher role values were. Contrary to expectations, higher teacher role values were associated with higher levels of behavior problems. In addition, there was a significant interaction between self-direction values and child age. Post hoc analyses revealed that, as expected, higher self-direction values reported by mothers were associated with lower levels of behavior problems for older children, $r=-.28$, $p<.01$, but not for younger children, $r=.12$, $p=ns$.

Self-Direction Skills. For the fathers, as shown in Table 12, higher levels of children's self-direction skills were only significantly correlated with higher parental self-direction values. However, after controlling for demographic variables, none of the parental values predicted children's self-direction skills (see Table 15).

For the mothers, as shown in Table 12, self-direction skills were not significantly correlated with any of the parental values. Similarly, after controlling for the demographic variables, none of the parental values predicted self-direction skills (see Table 16).

Social Responsibility. For the fathers, as shown in Table 12, higher social responsibility skills were only significantly correlated with higher self-direction values. However, after controlling for demographic variables, none of the main effects for parental values predicted social responsibility skills, although there was a significant interaction between self-direction values and MR family group (see Table 15). Post hoc analyses

revealed that higher self-direction values by the non-MR fathers were associated with higher social responsibility skills for non-MR children, $r=.42$, $p<.001$, but no relationship was evident in the MR families, $r=-.18$, p=ns.

For the mothers, as shown in Table 12, higher social responsibility skills were significantly correlated with both lower discipline role values and higher teacher role values. After controlling for demographic variables, none of the main effects for parental values predicted social responsibility skills, but teacher role values interacted with child age (see Table 16). Post hoc analyses revealed that as expected, higher teacher role values reported by the mothers were associated with higher social responsibility for younger children, $r=.27$, $p<.01$, but not for older children, $r=.03$, p=ns.

In summary, the results did not support the hypothesis that parental values would show similar relationships with child adjustment as parenting styles. There were few relationships between parents' values and child adjustment for the fathers or the mothers, and although the relationships that were found were generally consistent with the hypotheses, they were all qualified by interactions. In contrast to the lack of association between parents' values and the children's adjustment, the demographic variables entered in Step 1 showed many significant associations. In particular, parent education was associated with all three indices of children's adjustment. In addition, older children showed higher self-direction and social responsibility skills than younger children, and the MR children showed lower skills than the other children.

The Effects of Parents' Values Beyond the Effects of Parenting Styles

In order to test the hypothesis that parents' values would add to the prediction of child adjustment above and beyond the effects of parenting styles, hierarchical multiple

regressions were used. The overall strategy for these analyses was to enter parent education, child gender, child age, and MR family group in Step 1, the linear parenting styles in Step 2, a stepwise entry of the squared parenting styles variables and interaction terms associated with parenting styles in Step 3, the parenting values in Step 4, and a stepwise entry of the interaction terms associated with parenting values in Step 5. The tables present the R^2, the change in R^2 at each step, and the B coefficient associated with each predictor at the final step in the regression for Steps 4 and 5 only, since Steps 1, 2, and 3 are redundant of earlier analyses.

Insert Table 17 here

Externalizing Behavior Problems. For the fathers, as shown in Table 17, there were no significant main effects for the parenting values in predicting externalizing behavior problems after accounting for the effects of parenting styles. However, the significant interaction between discipline role values and child gender found in the previous analyses remained after controlling for parenting styles (see Table 15), indicating that the effects of discipline values on children's externalizing behavior problems are not mediated by parenting styles.

For the mothers, as shown in Table 17, the parenting values added significantly to the prediction of externalizing behavior problems, adding 6% to the predicted variance. After accounting for parenting styles, the mothers' teacher role values continued to be associated with higher levels of externalizing behavior problems as before. However, the earlier finding that higher self-direction values were associated with lower levels of

behavior problems for older children (see Table 16) was not evident after accounting for the effect of parenting styles on externalizing behavior problems.

Self-Direction Skills. For the fathers, as in the previous analysis, none of the parenting values predicted children's self-direction skills.

For the mothers, although there were no main effects for parenting values, there were two significant interactions terms involving discipline role values, that together added 11% to the predicted variance. First, higher discipline role values reported by the mothers were associated with lower self-direction skills for girls, $r=-.23$, $p<.05$, but not for boys, $r=-.05$, $p=ns$. Secondly, higher discipline role values for the non-MR mothers were associated with lower self-direction skills for the non-MR children, $r=-.22$, $p<.05$, but there was no relationship in the MR families, $r=-.01$, $p=ns$. Neither of these effects were present in the previous analyses, since earlier there were no relationships between parental values and children's self-direction skills (see Table 16).

Social Responsibility. For the fathers, as shown in Table 17, there were no significant main effects for the parenting values in predicting social responsibility skills after accounting for the effects of parenting styles. However, there was a significant interaction between discipline role values and child gender that was not present in the earlier analysis (see Table 15). Post hoc analyses revealed that higher discipline role values reported by fathers were associated with lower levels of social responsibility for boys, $r=-.25$, $p=ns$, and higher levels of social responsibility for girls, $r=.18$, $p=ns$, although neither relationship was significant. However, the earlier finding that higher self-direction values were associated higher levels of social responsibility for non-MR children (see Table 15) was not evident after accounting for the effect of parenting styles on social

responsibility skills.

For the mothers, although there were no significant main effects for parental values, there were two significant interactions involving the mothers' discipline role values, adding 8% to the predicted variance (see Table 16). First, higher discipline role values reported by mothers were associated with lower social responsibility skills for girls, r=-.23, $p<.05$, but not for boys, r=-.17, p=ns. Secondly, higher discipline role values reported by the non-MR mothers were associated with lower self-direction skills for the non-MR children, r=-.28, $p<.05$, but there was no relationship in the MR families, r=-.08, p=ns. Neither of these effects were evident in the previous analysis (see Table 16). In addition, the earlier finding that higher teacher role values were associated with higher levels of social responsibility for the older children (see Table 16) was not evident after accounting for the effect of parenting styles.

In summary, these results do not support the hypothesis that the effects of parental values on child adjustment are completely mediated by parenting styles. Instead, the results suggest that parental values, particularly discipline role values, have independent effects on children's development.

The Effects of Parental Control Values on Perceptions of Parenting Success

The final component of the study examined the implications of parental values and children's adjustment for parents' perceptions of parenting success. Two indices of parenting success were evaluated: perceptions of control over child behavior and perceptions of self-blame for children's misbehavior. These analyses tested the hypothesis that perceptions of parenting success are determined by the "goodness of fit" between

one's control values and children's behavior. Therefore, it was expected that lower perceptions of parenting success would be associated with poorer child adjustment only when the children's behavior violates the parents' values. Specifically, it was expected that higher levels of behavior problems would be associated with lower perceptions of parenting success only for the parents with lower self-direction values, higher discipline role values, and higher teacher role values. Similarly, lower levels of adaptive functioning would be associated with lower perceptions of parenting success only for the parents with higher self-direction values and higher teacher role values.

A series of hierarchical multiple regressions tested these hypotheses. In these analyses, parent education, child gender, and child age were entered in Step 1, parental values were entered in Step 2, and the child adjustment measures were entered in Step 3. In Step 4, the interactions between parental values and child adjustment were evaluated for entry in a stepwise manner. Significant interactions were first followed-up by performing a mean split on the parental value variable, and then calculating the correlations between the child adjustment measure and the parenting outcome measure at these two levels. If this procedure did not reveal the nature of the interaction, the parental value measure was divided into three groups: one standard deviation above the mean, within one standard deviation of the mean, and one standard deviation below the mean (Cohen & Cohen, 1978), and similar correlations were calculated at these three levels.

The zero-order correlations between parents' values and children's adjustment and perceptions of parenting success are presented in Table 18. Because data were missing for the measures of adaptive behavior skills for the parents with typically developing children, externalizing behavior problems and adaptive behavior skills were evaluated in separate

regression models in order to retain all of the subjects in the analyses involving externalizing behavior problems. The results of the regressions involving externalizing behavior problems are presented in Table 19 and the results of the regression involving adaptive behavior skills are presented in Table 20. The tables present the R^2, the change in R^2 at each step, and the B coefficient associated with each predictor at the final step in the regression. Support for the hypothesis is indicated by significant interaction terms in Step 4. The demographic variables did not predict perceptions of parenting success in any regression, and therefore the statistics for Step 1 are excluded from the tables.

Insert Tables 18, 19, and 20 here

Fathers

For the fathers, as shown in Table 18, lower perceptions of control and greater feelings of self-blame were significantly correlated with lower teacher role values. In addition, all three indices of child adjustment were significantly correlated with the parenting outcomes, in that poorer child functioning was associated with lower perceptions of parenting success.

Externalizing Behavior Problems. For perceptions of control, consistent with the univariate correlations, higher teacher role values and higher levels of externalizing behavior problems were associated with perceptions of less control after controlling for demographic variables (see Table 19). However, contrary to the hypothesis, there were no significant interactions between parental values and externalizing behavior problems. Similarly, higher teacher role values and higher levels of externalizing behavior problems

were associated with perceptions of self-blame after controlling for the demographic variables. Additionally, there was a significant interaction between teacher role values and externalizing behavior problems. In order to evaluate the nature of the interaction, the fathers were divided into two groups based on scoring above or below the mean on teacher role values, and the correlation between externalizing behavior problems and self-blame at each level was calculated. Consistent with the hypothesis, higher levels of externalizing behavior problems by the child were associated with greater self-blame for fathers when the fathers had higher teacher role values, $r=.39$, $p<.001$, but not when they had lower teacher role values, $r=.17$, $p=ns$.

Adaptive Behavior Skills. Regarding perceived control, as shown in Table 20, after controlling for the demographic variables, parental values and children's adaptive behavior skills were not associated with perceptions of control. However, regarding self-blame, consistent with the univariate correlations, lower teacher role values and lower levels of social responsibility skills were associated with greater self-blame. Finally, contrary to the hypothesis, there were no significant interactions between parental values and children's adaptive behavior skills for either control or self-blame.

Mothers

Externalizing Behavior Problems. As shown in Table 18, higher levels of externalizing behavior problems were associated with less perceived control and greater self-blame. These relationships remained after controlling for demographic variables (see Table 19). For the prediction of perceived control, there was a significant interaction between self-direction values and externalizing behavior problems. The nature of the interaction was revealed by dividing the mothers into three groups based on their self-

direction values: one standard deviation below the mean, within one standard deviation of the mean, and one standard deviation above the mean. Since the measure of self-direction values was calculated as self-direction values minus conformity values, lower levels of self-direction values indicate higher conformity values. Consistent with the hypothesis, higher levels of externalizing behavior problems by the child were associated with less perceived control when the mothers had low self-direction values, r=-.47, p<.001, and average self-direction values, r=-.39, p<.001, but not when they had higher self-direction values, r=-.23, p=ns. Thus, the relationship between externalizing behavior problems and perceived control decreased as self-direction values increase and conformity values decreased.

Similarly, for the prediction of self-blame, there was a significant interaction between discipline role values and externalizing behavior problems. The nature of the interaction was revealed by dividing the mothers into two groups, above and below the mean. Consistent with the hypothesis, higher levels of externalizing behavior problems by the child were associated with greater self-blame for mothers when the mothers had higher discipline role values, r=.29, p<.001, but not when they had lower discipline role values, r=.09, p=ns.

Adaptive Behavior Skills. As shown in Table 18, higher discipline role values and higher teacher role values were significantly correlated with less perceived control. Neither of the child adaptive behavior skills were correlated with perceived control, and only lower levels of social responsibility skills were correlated with greater self-blame. Furthermore, as shown in Table 20, after controlling for demographic variables, none of the parental values and neither of the measures of child adaptive functioning predicted

perceptions of control or self-blame. However, for the prediction of perceived control, there was a significant interaction between mothers' self-direction values and children's self-direction skills (see Table 20). Again, the mothers' self-direction values were divided into three groups based on their deviation from the mean. The results revealed that lower levels of children's self-direction skills were associated with lower perceived control for the mothers with higher self-direction values, $r=.48$, $p<.05$, but not for the mothers with average self-direction values, $r=.04$, p=ns, or for the mothers with low self-direction values, $r=.17$, p=ns. Thus, as expected, the relationship between children's self-direction skills and perceived control decreased as mothers' self-direction values decreased.

Similarly, for the prediction of self-blame, there was a significant interaction between mothers' self-direction values and children's social responsibility skills. The nature of the interaction was revealed by dividing the mothers into two groups, above and below the mean. Because of the nature of the self-direction values measure, the mothers below the mean on self-direction values reported higher conformity values. Consistent with the hypothesis, lower levels of social responsibility skills were associated with greater self-blame for the mothers with lower self-direction values, $r=-.26$, $p<.05$, but not for the mothers with higher self-direction values $r=-.14$, p=ns. Thus, the relationship between children's social responsibility skills and self-blame decreased as self-direction values increased (and therefore conformity values decreased).

In summary, the hypothesis was largely unsupported for the fathers, but received considerable support for the mothers. In general, the results revealed that lower levels of child adjustment were associated with lower perceptions of parenting success only for the mothers with higher control values.

Chapter 4

DISCUSSION

The results of this study begin to clarify the sources of variation in parental values associated with different parenting experiences, and provide support for the theory that parents' values play an important role in the socialization process (e.g., Goodnow, 1985; 1988).

Factors that Affect Parental Values and Practices.

The Effects of Child Mental Retardation on Parental Values and Practices.

For the parents with children with mental retardation, a relatively consistent picture emerged in which these parents valued more control and, to a lesser extent, exercised more control in parenting than the comparison parents. For the fathers, greater control was evident only in their childrearing values, as the fathers of children with mental retardation valued self-direction less than the comparison parents. For the mothers of children with mental retardation, higher control values and controlling parenting styles were evident for the mothers of older children only, in terms of lower self-direction values for children, higher discipline roles for themselves, and higher levels of firm control, suggesting that the effects of disabilities on mothers' values are especially salient during adolescence.

Since the general trend was for the non-MR mothers with older children to report less control than the non-MR mothers with younger children, these findings suggest that the MR mothers fail to show expected age-related reductions in control and instead

maintain a high level of control through adolescence. Zirpoli and Bell (1987) caution that a high level of control over time for parents with children with mental retardation may signal an insensitivity to the MR child's developing abilities, and therefore hinder the development of more adaptive behaviors by failing to foster independence. Perhaps parents maintain a high level of controlling behaviors because these practices are driven by relatively intractable or rigid control values, that once formed when children are younger, are unresponsive to developmental change. Alternatively, the high level of control values for mothers with older children with mental retardation may indeed be responsive to children's ability levels, so that mothers' control values reflect sensitive and responsive parenting (e.g., Marfo, 1990). That is, mothers' control values may remain high because their adolescent children continue to require a high level of management and guidance. This hypothesis is consistent with longitudinal observations of parent-child interactions (Floyd, Costigan, & Phillippe, in press) in which a high level of directives with adolescents was responsive to these children's continued need for greater management and direction. Similar longitudinal data are necessary to fully assess the issue of rigidity versus responsiveness in parental values.

Importantly, for both the fathers and the mothers, the absence of group differences on power-oriented control and family closeness suggests that the MR parents are able to exercise more control without resorting to excessive coercive practices and without sacrificing family harmony. These findings are consistent with observations of family interactions which demonstrate that although MR parents engage in more behavior management than comparison parents, they do not show more coercive exchanges (Floyd & Phillippe, 1993), and they do not differ from comparison families in observer ratings of

closeness, affective tone, or cohesion (Hampson, Hulgus, Beavers, & Beavers, 1988). Taken together, the findings of more firm control and similar levels of power-oriented control and family closeness demonstrate considerable consistency between parents' self-reported parenting styles and observations of their parenting practices.

Contrary to the hypotheses, for both the mothers and the fathers, there was an unexpected finding that the MR parents valued their teacher roles less than the comparison parents. Thus, instead of conceptualizing teacher role values as indicating higher control values, it seems that, at least for the MR parents, teacher role values are distinct from other forms of control. Due to the children's intellectual limitations, these parents may feel less capable of teaching their children than parents with typically developing children. Research by Strom and colleagues indicates that parents with children with mental retardation are less positive about their own ability to guide children's learning than comparison parents (Strom et al, 1984). The present findings suggest that they may also come to value this role less, perhaps as a result of their failures in this area. Thus, parents' values may not only follow from their perceptions of their child's needs, as originally hypothesized, but also from their perceptions of their own capabilities (based on success versus failures).

Finally, since the measures of parental role values and parenting styles assessed general values and practices rather than those specific to parenting a disabled child, it seems that the influence of the disabled child's special needs on parental values and practices may generalize to role values and parenting practices regarding all children. This is consistent with research indicating "spillover effects," in which the more directive and less positive parent-MR child interactions are also characteristic of parents' interactions

with other children in the family as well (Floyd & Adams, 1990). This "spillover effect" may occur because raising a child with mental retardation influences the core values about parenting that are presumed to underlie parenting practices.

The Effects of Child Behavior Problems on Parental Values and Practices. In contrast to the parents with children with mental retardation, there was less evidence that parents with children with behavior problems value more control and exercise more control than comparison parents. Consistent with the hypothesis, the behavior problem mothers reported greater control values than comparison mothers, in terms of higher disciplinarian and teacher role values. However, the finding that behavior problem mothers with younger children valued self-direction more than comparison mothers with younger children was unexpected. Perhaps mothers of children who are difficult to manage from an early age de-emphasize conformity as a childrearing goal. This is consistent with the hypothesis discussed above regarding the teacher role values of MR parents, suggesting that parental values may be formed in part by evaluations of their capabilities as parents. If children demonstrate behavior problems from a very young age, mothers may feel less capable of producing conformity, and therefore reduce their values in this area. Alternatively, mothers with children with behavior problems may inadvertently help maintain children's behavior problems by valuing too much self-direction and too little conformity in early childhood. Consistently, research regarding the parenting practices that are associated with conduct disorders in children suggests that deficits in parental monitoring and parental involvement accelerate the rate at which children engage in aggressive and antisocial behaviors (Patterson 1982; Miller & Prinz, 1990). If mothers who do not value child conformity fail to adequately monitor their

children's activities and discipline misbehavior, this practice may contribute to children's behavior problems.

Interestingly, the results for the mothers with older children with behavior problems showed the opposite pattern, in that they reported higher discipline role values than comparison mothers with older children. Furthermore, their self-direction values were as low as those of MR mothers with older children. As with children with mental retardation, an important issue concerns whether this higher level of control is excessive, or whether it is responsive to the child's greater need for control and guidance. For instance, higher conformity and discipline role values with adolescents may indicate excessive or inappropriate levels of control that do not recognize the adolescent's growing need for independence. Such a focus on obedience and control may further reinforce behavior problems by increasing the opportunities for child rebellion and parent-child conflict. Consistently, the results from the regression analyses suggest that higher conformity values are associated with less family closeness and more behavior problems in families with adolescents. Alternatively, it is possible that the high level of control values reported by mothers of older children is responsive to these children's need for greater control. In particular, the fact that many of the children in the sample had a diagnosis of attention deficit disorder, rather than oppositional or conduct disorders, suggests that these mothers may be sensitive to their children's greater need for more direction and guidance than other children. Similarly, the evidence for higher teacher role values, in addition to discipline role values, is consistent with the hypothesis that higher levels of control represent sensitive parenting, since teacher role values indicate that the higher levels of control are not exclusively focused on behavior management. Again, longitudinal

data are needed to assess these conflicting hypotheses.

Taken together, the age-related findings of lower control values with younger children and higher control values with older children suggests a potential cycle of reciprocal causation consistent with Bell's (1979) bi-directional model. That is, lower levels of control values with younger children may result in higher levels of behavior problems. In response, mothers may increase their control values, but act on them ineffectively, thus inadvertently causing further increases in behavior problems. Unfortunately, the cross-sectional nature of this study cannot directly address this hypothesis. In addition, longitudinal data are also necessary to test the implication that the age-related changes in values are accompanied by similar changes in parenting practices.

The present study does not support the assumption that mothers of behavior problem children act in accordance with their values, since unlike the MR mothers, there was no evidence for higher controlling parenting styles with children of any age. This is surprising in light of past research documenting that behavior problem mothers are more controlling than comparison mothers during observations of parent-child interactions (e.g., Barkley, 1985; Webster-Stratton, 1985a). If the mothers do not behave in accordance with their control values, they may experience increased stress and frustration, since they are not able to produce behaviors in the children that would conform to their values. That is, mothers may highly value control, but lack the skills to effectively manage their children's behavior. This apparent incongruence between parental values and practices may partially explain why mothers with children with behavior problems are found to discipline in ways that are explosive, noncontingent, or inconsistent (e.g. Patterson, 1982).

Alternatively, perhaps the global reports of parenting styles assessed in the present

study do not adequately capture parenting practices that are specific to interactions with behavior problem children. For instance, mothers of children with behavior problems may be inaccurate reporters of their own behavior, because they may lack an objective reference points for comparison. That is, these parents may not see themselves as particularly strict or controlling, even though an objective observer would rate them as such. Perhaps mothers with children with behavior problems define "strictness" differently, or perhaps they are unaware that family rules are not clear and consistent. Similarly, it may be that the types of parental deficits associated with children's conduct problems, such as the reinforcement of coercive behaviors and the failure to reinforce positive behaviors on a moment-by-moment basis (Patterson, 1986), are not captured in the global reports of family rules, structure, organization, and punishment. If so, then the types of parental control practices that are associated with the development of behavior problems would not be evident in reports of parenting styles. Research on how self-reports of parenting practices match observations of parent-child interactions is needed to assess this possibility.

Finally, consistent with past research documenting less warmth in families with children with behavior problems (e.g., Haddad et al., 1991), higher control values for the BP mothers seem to be at the expense of family closeness, since both the mothers and fathers with behavior problem children reported less family closeness than the comparison parents. This pattern of results is consistent with Baumrind's (1989) definition of authoritarian parenting, and is potentially problematic because the absence of feelings of warmth and security in the family, particularly in the context of high levels of control, may increase children's aggressiveness and delinquency. Parental warmth and acceptance are

important for the development of self-esteem (e.g., Gecas, 1972) and psychosocial competence (e.g., Cooper, Grotevant, & Condon, 1983). In addition, parental acceptance and warmth provides the security necessary for healthy separation and individuation in adolescence (e.g., Baumrind, 1991). Thus, lower levels of family closeness may result in early separations from the family before the child is developmentally ready or may make it more likely that children will associate with deviant peer groups, which could further exacerbate behavior problems (e.g., Sessa & Steinberg, 1991).

The Effects of Gender on Parental Values and Practices. For all of the parents, there was no evidence that child gender influenced parents' values. Thus, in contrast to previous research suggesting that parents value conformity more for girls and self-direction more for boys (e.g., Block, 1983), it seems that the child's disability status overrides the effects of child gender in forming parents' values and parenting styles. However, the fact that gender differences in parental values and practices were not evident for the comparison parents either suggests that the influence of child gender as a basis for parental values may be overstated. Alternatively, since the parental role value measure and the parenting styles measures were not specific to the target child, and at least some of the parents had other children, both boys and girls, the current data cannot really detect differences related to gender.

Finally, the relative absence of differences among the groups of fathers as opposed to the groups of mothers suggests that fathers' values and parenting styles are less affected by characteristics of the disabled child than those of mothers. This may be due to the fact that on average, mothers spend more time with the disabled child and are more responsible for child care than fathers (e.g., Bristol, et al., 1988). Consistently, mothers reported

more control than fathers, in terms of higher teacher role values and more firm control. The one area in which fathers reported more control than mothers, power-oriented control, suggests that fathers may be more responsible for discipline and mothers may be more responsible for structuring daily routines and rules and more attuned to the affective climate of the family. Finally, the differences between mothers and fathers were robust in that they were present regardless of the child's disability status. Thus, it seems that mother/father role differences are similar across different types of families and are not affected by the experience of raising children with special needs. These findings contrast with those of Floyd and Phillippe (1993) who found few mother-father differences in observations of parent-child interactions across parents with children with mental retardation and comparison parents.

The Effects of Parental Values and Practices on Child Development

In contrast to the many mother-father differences found for mean levels of values and parenting styles, the effects of these constructs on child development were quite similar for mothers and fathers. Therefore, the hypothesis that mothers' values and parenting styles would be relatively better predictors of child adjustment than fathers' was not supported. In addition, the fact that the child adjustment measures were almost always completed by the mothers suggests that the results for the fathers are particularly strong. That is, the relationships involving the fathers' data are less subject to method variance biases than the mothers' data, since both fathers and mothers provided data for the fathers' analyses.

There was a relatively clear pattern of relationships between parental values and

parenting styles that was consistent across mothers and fathers. Past research into parenting cognitions has encountered difficulties demonstrating a link between the way parents think about children and the way they interact with them (e.g., Sigel, 1985), perhaps because the parenting behaviors have been too specific, and therefore too open to situational variation, to detect consistent relationships with parenting cognitions (e.g., Sigel, 1986). That is, moment by moment parenting practices are unlikely to totally reflect parental values, and instead are also likely to be influenced by other contextual factors such as parental mood or the presence of competing demands for parental attention. The parenting practices examined in the present study were global reports of parenting styles rather than rates of specific behaviors, and at this more global level, expected relationships between values and parenting styles were found. However, since parenting practices were not directly observed, the current findings cannot rule out the hypothesis that people see their values and practices as consistent, and report consistencies that are not apparent in actual behaviors.

In particular, the results suggest that parents' childrearing values are related to the way in which they structure the environment and organize the child's daily life, since parents who valued self-direction provided less structure and rules than parents who valued conformity. In addition, the results suggest that parents' discipline role values are related to the amount of strict punishment used in response to child misbehavior. Finally, the finding that teacher role values were associated with more family closeness suggests that parents who value their role as teachers may be generally more involved in parenting than parents with lower teacher role values. That is, it may be that parental involvement in teaching is more discretionary than other parenting roles, so that parents who emphasize

parental teaching are more child-oriented and more interested in fostering family cohesion and togetherness than parents with lower teacher role values.

Although parents' values were related to parenting styles, the results do not support the hypothesis that parenting styles mediate the effects of values on child adjustment. First, in contrast to the consistent relationships between values and parenting styles, fewer relationships were found between parental values and children's adjustment. In addition, the parents' role values that did predict child adjustment did so after controlling for parenting styles, suggesting that parental role values have some direct effects on child adjustment that are not mediated by parenting styles.

Despite the lack of clear support for the mediational model, there was an interesting pattern to the predictors of children's externalizing behavior problems versus adaptive behavior skills, in which externalizing behavior problems were predicted by levels of family closeness whereas adaptive behavior skills were predicted by levels of parental control.

Regarding externalizing behavior problems, for both mothers and fathers, less family closeness was associated with more behavior problems. In contrast, neither of the controlling parenting styles predicted externalizing behavior problems. In addition, preliminary analyses did not reveal any interactions between control-oriented parenting styles and levels of family closeness. Thus, it seems that the affective quality of the family is a more salient for behavior problems than parental control practices.

The finding that controlling parenting styles were not associated with children's behavior problems contrasts with research with young children demonstrating positive relationships between firm control and child compliance and negative relationships

between coercive control and child compliance (e.g., Kochanska & Askan, 1995). However, differences in children's ages and/or differences in the method of assessing parental control (observations versus self-reports) may explain the lack of consistency. Furthermore, the current finding that parents' reports of family closeness were better predictors of children's behavior problems than parental control contrasts with the findings of Barber, Olsen, and Shagle (1994), who found that adolescent's reports of parental control were better predictors of adolescent's externalizing behavior problems than their reports of parental support. Thus, it may be that children's perceptions of parental control and parents' perceptions of support are most highly related to children's behavior. Perhaps the parenting practices that children see as controlling are seen by parents as supportive.

In contrast to parenting styles, only two parental values had direct effects on children's externalizing behavior problems, both before and after controlling for parenting styles. First, as expected, fathers' higher discipline role values were associated with more behavior problems for boys. However, the finding that mothers' higher teacher role values predicted more externalizing behavior problems was unexpected. Perhaps this finding indicates that since mothers with children with high levels of behavior problems are less successful in their disciplinarian role, they value or emphasize their teaching role instead. This pattern would be consistent with the hypothesis offered earlier that parental values may be formed in part by parents' perceptions of their own capabilities as parents.

Regarding the prediction of adaptive behavior skills, the results showed that parental control practices and discipline role values were relatively more important for fostering adaptive behavior than family closeness or valuing independence, particularly for fathers. Contrary to expectations, with a few exceptions, self-direction values, teacher

role values, and levels of family closeness were not related to children's adaptive behavior skills. Instead, adaptive behavior skills were predicted most consistently by both firm and power-oriented controlling parenting styles and by discipline role values. In particular, children's higher self-direction skills were predicted by mid-levels of power-oriented control and lower discipline role values for mothers, and higher levels of firm control for fathers. Similarly, children's higher social responsibility skills were predicted by lower discipline role values for mothers, and high levels of firm control and lower levels of power-oriented control and discipline role values for fathers.

These results support the distinction between firm control and power-oriented control. As expected, firm control was positively associated with children's adaptive behavior skills, especially at the highest levels, whereas higher levels of power-oriented control and discipline role values were negatively associated with adaptive behavior skills. Thus, the findings are consistent with the hypothesis that the development of child qualities such as independent initiative, perseverance, responsibility, and cooperation are facilitated by control that involves a high level of organization and guidance, and are hindered by extreme levels of control that is strict or restrictive (e.g., Baumrind, 1989). Furthermore, the results suggest that future research should investigate curvilinear relationships between parenting practices and children's development, since both forms of control showed nonlinear relationships with children's self-direction skills.

Importantly, the families with children with mental retardation seemed to be an exception to these trends. That is, for both the mothers and the fathers, power-oriented control showed differential relationships with social responsibility for the MR and non-MR parents. Although the correlations did not reach significance in the MR families, both the

mothers and the fathers showed positive relationships between stricter forms of control and children's social responsibility skills. In addition, higher discipline role values reported by mothers were not associated with lower levels of adaptive behavior skills for the MR children as they were for the non-MR children. Therefore, unlike the non-MR families, higher levels of strict control may not be detrimental to the development of adaptive behavior skills for children with mental retardation. Consistently, Marfo (1990) argues that there is little empirical support for the negative connotations associated with high levels of control in families with MR children, and suggests that even high levels of parental control with MR children may in fact be adaptive. For typically developing children, normative developmental increases in children's social-cognitive abilities follow from internal maturational forces, in addition to external parenting pressures (Maccoby, 1984). Perhaps these innate drives towards greater self-control and social competence are reduced or delayed in MR children, and as a result, these children may require more external control to develop these qualities. Thus, parents' exercise of strict control may compensate for a lower rate of maturational increases in adaptive behaviors compared to typically developing children. Consistently, higher self-direction values for MR fathers were associated with more power-oriented control, indicating that fathers with children with mental retardation may (correctly) believe that strict control is necessary to foster independent functioning in their children.

Across the analyses, child characteristics other than the child's disability status appeared to be differentially important for mothers and fathers. In particular, for the mothers, child age seemed to be as salient as the child's disability status in predicting child adjustment, since several of the expected relationships between parental values and child

adjustment were found for the mothers of older children only. This is consistent with the findings that many of the child group differences in mothers values and parenting styles were evident only for the mothers of older children. It may by that mothers' values influence child development in a cumulative manner, so that their impact on child adjustment is not evident until adolescence. Similarly, it may be that adolescents, more so than younger children, are aware of their mothers' values and have internalized them to some extent (e.g., Holden & Edwards, 1992), so that the behavior of older children more closely conforms to mothers' values than the behavior of younger children. Although many theories suggest that parent-child relationships are disrupted during adolescence, research evidence indicates that parents continue to be an important influence and that adolescents retain their emotional connection to parents during adolescence (Collins, 1992). Thus, at least for global traits such as conformity versus self-direction, adolescents may adopt their parents' values. Consistently, Cashmore and Goodnow (1985) found that adolescents generally perceive considerable similarity between their values and those of their parents.

For the fathers, child gender appeared to be particularly salient, as many of the predictions of child adjustment were significant for the fathers of boys only. This pattern suggests that fathers may be more involved in parenting boys or more invested in the development of boys, so that their values and parenting styles are more predictive of outcomes for boys than girls. This is consistent with observational studies that compare mothers' and fathers' interactions with sons and daughters. In particular, research evidence suggests that fathers engage in more extensive and varied interactions with sons compared to daughters (Vaughn, Block, & Block, 1988), and that fathers' influence may

be less prominent for girls than boys (Block, Block, & Morrison, 1981). Gjerde (1988) speculates that fathers' influence on girls may be less direct because fathers may spend less time in dyadic interactions with daughters compared to sons, and instead interact primarily with daughters in the presence of mothers. In addition to fewer direct interactions with daughters, other research indicates that fathers more than mothers treat sons and daughters differently (e.g., Siegal, 1987). For instance, Leaper et al. (1989) found that fathers engaged in more behaviors emphasizing separation with sons, and more behaviors emphasizing closeness with their daughters. Interestingly, in the current study, the parenting style that was most predictive of behavior problems for the fathers of boys was family closeness. Perhaps since Leaper et al.'s (1989) findings suggest that interactions characterized by closeness may be less common for fathers and their sons, such practices may be quite salient and therefore more highly predictive of child adjustment than control practices for boys.

Direction of Effects

The above discussion is not intended to imply that the direction of effects runs exclusively from parents' values and parenting styles to children's adjustment. Indeed, the first component of this study focused on the extent to which child characteristics influence parenting. Unfortunately, the cross-sectional nature of this study cannot address the question of causality, and it is likely that some of the above relationships can also be understood as child characteristics influencing parenting values and parenting styles. For instance, instead of lower levels of family closeness predicting increased behavior problems, it could be that when children exhibit a high level of behavior problems, family life is characterized by more conflict and less cohesion, so that over time, stressful

interactions erode feelings of family closeness.

Indeed, the results of this study provide support for bi-directional models of parent-child relationships (e.g., Bell, 1979; Bell & Chapman, 1986) by showing the effects of child characteristics on parenting as well as the effects of parenting on child characteristics. Thus, consistent with the bi-directional model, it is likely that both processes are operating, so that child characteristics and parenting continually feedback into one another. In this way, for example, higher levels of behavior problems may initially reduce feelings of family closeness, but reduced family closeness likely creates circumstances that further elevate children's behavior problems. However, because parents possess more power, knowledge, resources, and competency than children, they have more avenues for impacting child development than the reverse (e.g., Maccoby, 1992; Baumrind, 1993). At the same time, however, child characteristics such as mental retardation and chronic illness are not created by parents, and therefore the direction of effects is especially likely to be reversed in these families.

Implications of Parental Control Values for Perceptions of Parenting Success.

For the mothers, there was considerable support for the hypothesis that parental values can either exacerbate or buffer the effects of having a difficult child. That is, lower levels of child adjustment were associated with lower perceptions of parenting success only when the child's level of functioning violated the mothers' values. Thus, it seems to be the "goodness of fit" between mothers' values and children's behavior that determines mothers' sense of parenting success. This was particularly true for violations of mothers' values for children's behavior (self-direction versus conformity), rather than parental role

values. Therefore, the "goodness of fit" between child characteristics and environmental demands, in addition to affecting children's adjustment (Lerner, 1993), also has implications for mothers' adjustment.

For the fathers, perceptions of parenting success seem to be determined directly by children's behavior, regardless of their values. These results suggest that fathers' beliefs about their own competence as a parent may be more vulnerable to difficult child behavior. As a result, fathers may withdraw from interactions with children who are difficult to manage more readily than mothers. If feelings of parenting incompetence cause fathers to withdraw, this may explain why mothers assume the majority of child management and teaching responsibilities (e.g., Stoneman, Brody, & Abbott, 1983). In contrast to fathers, mothers may have more mechanisms for protecting their parenting self-esteem than fathers, since difficult child behavior was associated with perceptions of less parenting competence only for mothers with higher control values. That is, mothers may adjust their values to reflect not only their child's needs, but also what they believe is possible to achieve, thus enabling them to maintain their motivation to parent in the face of difficult child behavior (e.g., Goodnow, 1985).

Regardless of children's behavior, fathers with higher teacher role values felt more successful as parents than fathers with lower teacher role values. This is consistent with the conceptualization offered earlier that parents with higher teacher role values may be more involved and child-oriented than parents with lower teacher role values. Research by McConachie (1989) suggests that fathers with children with mental retardation who spend more time interacting with their children display more sensitivity, provide more positive feedback, and obtain more child compliance than fathers who spend relatively less

time interacting with their children. Thus, when fathers are more involved in a teaching role with their children, in addition to showing more effective parenting, they may also have more opportunities to develop a view of themselves as competent caregivers. However, the current results do not address whether perceptions of parenting competence follow from role values or whether role values follow from perceptions of parenting competence. That is, it is possible that fathers who feel more capable as parents come to value their teacher roles more than fathers who feel relatively less capable. This hypothesis further supports the idea proposed earlier that parental values may follow from parenting successes and failures.

Clinical Implications

There are several implications of the current findings for clinicians working with families. First, the current findings support family systems theories that firm control is beneficial to children's development (e.g., Falloon, 1989). Family systems theories propose that families in which parents are actively involved in parenting and maintain appropriate boundaries between parents and children are more effective than families in which there is role reversal between parents and children or in which parents are relatively disengaged from their parenting responsibilities (e.g., Minuchin & Fishman, 1981). It is possible that parents' control values underlie the way in which parenting roles are defined or the way in which the family power hierarchy is organized. Therefore, attempts to alter family structures may benefit from examining parental control values and how they relate to family organization.

Second, the finding that parental values were related to parenting styles also

suggests that parent training and family therapy interventions may be more effective if they address the values that underlie parents' styles of interacting with their children, in addition to attempting to alter specific behaviors. That is, therapeutic efforts to achieve stable changes in parenting strategies may fail without addressing how parents think about their parenting role or their childrearing goals. Thus, for example, attempts to encourage parents to reduce their reliance on power-oriented forms of control may be less successful if the parents highly value their disciplinarian role. Values are basic assumptions parents have that typically go unexamined, and therapy would probably be more effective if parents' values were explicitly examined in relation to children's abilities and developmental levels, and altered if found to be unrealistic or extreme. Similar attention to parents' cognitions are advocated for understanding extreme parenting behaviors such as child abuse. For instance, abusive mothers have been found to hold more unrealistic expectations regarding children's capabilities than nonabusive mothers, and these specific expectations are believed to contribute to abusive episodes when children fail to live up to mothers' unrealistic expectations (e.g., Azar, Robinson, Hekimian, & Twentyman, 1984). The results of the current study suggest that unrealistic values regarding control may also underlie difficulties with less extreme parenting practices. Examination of parental values may be particularly important when children's development is non-normative, such as children with mental retardation or behavior problems.

Third, the findings suggest several specific considerations for clinicians working with families with children with special needs. For the parents with children with mental retardation, the finding that power-oriented control may not be detrimental to the development of adaptive behaviors, and may even have beneficial effects, suggests that

clinicians should be cautious about automatically assuming that strict control is problematic. In addition, the findings suggest that mothers with older children with mental retardation may need extra support, as normative increases in children's competence may not be evident and mothers need to maintain a higher level of control. This may be especially problematic for mothers with higher self-direction values or lower disciplinarian role values. Similarly, for mothers with older children with behavior problems, the appropriateness of higher control values should be assessed. That is, for some parents with children with behavior problems, higher control values into adolescence may be responsive to these children's need for greater control and guidance. However, for others, high control values in adolescence may be extreme or unresponsive to the adolescent's increasing abilities. In such case, mothers' emphasis on control at an age when children are pushing for increased freedom and autonomy may result in increased coercive exchanges and more child defiance. Additionally, for families with children with behavior problems, family closeness may also be low, so that interventions should focus on fostering family cohesion in addition to focusing on the development of more effective parental control.

Fourth, the results suggest that more extreme control values may leave mothers vulnerable to difficult child behavior. For some parents, an appropriate therapy goal may be to redefine what it means to be a successful parent, particularly for parents with challenging children. Ellis (1977) based his theory of depression on the notion that irrational beliefs about how things "should" be cause people distress. Similarly, it may be that parents' values regarding how much they "should" be able to control their children may contribute to low parenting confidence. In some families, it may be that mothers'

expectations of themselves or for their children regarding control may not be realistic given their child's ability level. Thus, parents can potentially protect their parenting self-esteem by evaluating their control values and adjusting their expectations for their child or for themselves to more realistically match their child's behavior and abilities.

Finally, the results highlight the important role of fathers for children's development, since fathers' values and parenting practices predicted child development as well as those of mothers. Although parent training programs typically advocate for involving fathers, in practice, these programs usually only involve mothers (e.g., Miller & Prinz, 1990), and consequently are potentially only influencing half of the child's parenting experience. By not involving fathers, the potency of therapeutic interventions is limited. First, research indicates that when fathers are involved in therapy, treatment gains related to effective mother-child interactions are more likely to be maintained (Webster-Stratton, 1985b). Second, the inclusion of fathers in parenting programs introduces additional avenues for effecting change via the fathers' values and practices, thus increasing the potential for change (Colapinto, 1989). In addition, the results suggest that clinicians should pay close attention to fathers' emotional needs and their feelings about their parenting, since fathers' perceptions of parenting success were more directly driven by children's behavior than those of mothers. Increasing fathers' parenting confidence may result in greater father involvement in parenting. This is particularly important in families with children with special needs (e.g., Combrink-Graham & Higley, 1984). Therefore, as with mothers, therapy could focus on exploring with fathers what it means to be a successful parent, and on nurturing fathers' sense of effective control.

Directions for Future Research

There are several directions for future research that would address the limits of the current study. For instance, future research in this area could assess directly whether parents' form different values for their disabled child versus healthy siblings, or whether the differences found in the current study generalize to all children. Earlier, it was suggested that variations in parents' control values and practices may indicate that parental values formed in response to the disabled child's needs generalize to all children. However, data directly assessing this issue would be helpful. Similarly, the effects of child gender on parental values could be more directly assessed by comparing parents' reports of their values for their sons versus daughters within the same family.

Furthermore, longitudinal data is necessary to directly assess whether values are relatively stable, or whether they are responsive to developmental changes in children and/or parents' evaluations of their own parenting capabilities. The findings in the current study regarding child age suggest that parents may continually adjust their values in response to changing child needs or perceived success and failures as parents, but these hypotheses are highly speculative without longitudinal data. In addition, longitudinal data could better address the questions raised about causality among values, parenting practices and child characteristics.

Future research could also attempt to determine the conditions in which parents are more or less likely to behave in accordance with their values. For instance, it may be that parents act on their values in a planful manner in terms of how they structure their children's daily life, but that parental values are less important to spontaneous reactions to child misbehavior. Accordingly, it would be interesting to assess specific parenting

behaviors in addition to the global reports of parenting styles examined here in order to determine whether the relationships found between parental values and parenting styles are also evident in parents' moment-by-moment interactions.

In addition, there are several directions for future research that may reveal clearer links between parents' values and child development. For example, it may be that parents hold different beliefs about how children acquire behavioral self-control or adaptive behavior skills, despite having similar values. That is, two parents may hold similarly high self-direction values for their children, but differ in their beliefs about how children develop independent functioning skills. Alternatively, the range or diversity of parental role values may be the most important factors for understanding links with children's development. For instance, optimal child development may be associated with parents who are able to effectively manage a number of different parenting roles compared to parents who value one parental role to the exclusion of others.

Finally, an interesting question for future research concerns the congruence between mothers' and fathers' values, and how similarities versus dissimilarities affect child adjustment (e.g., Gjerde, 1988). For instance, children from families with high levels of parental concordance probably receive more consistent messages, and therefore show stronger relationships between parental values and child adjustment. In addition, parental agreement on values and parenting practices could also be related to other domains of family functioning, such as the quality of the parenting alliance. Although much research has examined the correlates of parental agreement on childrearing practices in terms of both child development (Vaughn, Block, & Block, 1988) and parenting behaviors (Gjerde, 1988), parental concordance has not been related directly to coparenting or the parenting

alliance (e.g., Frank et al., 1991). Thus, expanding the focus of future research in this way may uncover further relationships between parental values and parenting styles and children's adjustment. For example, parental agreement, in terms of childrearing values and parenting styles, may be related to stronger parenting alliances, which in turn relate to more competent child functioning.

APPENDIX A

Table 1

Means and Standard Deviations and Frequencies of Demographic Characteristics- Parents

Variable	Mental Retardation	Comparison	Behavior Problems	Chronic Illness
N				
Father	56	24	27	48
Mother	76	41	40	59
Age				
Father	41.84 (6.94)	40.88 (7.05)	39.07 (6.99)	40.08 (6.19)
Mother	38.72 (6.08)	36.85 (5.82)	36.67 (5.05)	37.34 (6.40)
Education[1]				
Father	13.84 (2.07)	14.58 (2.38)	13.26 (1.63)	14.26 (2.54)
Mother	13.71 (2.21)	14.13 (2.15)	13.28 (2.25)	13.83 (2.08)
YearlyIncome[2]	38.46 (35.51)	34.00 (26.09)	28.00 (19.78)	32.45 (23.92)
Marital Status				
Married	52	24	21	35
Single	24	17	19	24
Ethnicity				
Caucasian	60	27	32	47
Minority	13	12	5	11

[1]= in years, [2]= in thousands

Note. Standard deviations in parentheses.

Table 2

Means and Standard Deviations and Frequencies of Demographic Characteristics- Target Children

Variable	Mental Retardation	Comparison	Behavior Problems	Chronic Illness
Age	12.25 (2.77)	11.78 (3.18)	11.74 (2.57)	11.04 (3.19)
Gender				
Boys	34	22	23	30
Girls	42	19	17	29
Age Group				
6-12 years	38	25	27	36
13-18 years	38	16	13	23
Behavior Problems				
Yes	27	0	40	20
No	49	41	0	39

Note. Standard deviations in parentheses.

Table 3

Results of Factor Analysis of Role Disposition Questionnaire: Items with loading greater than .45

Item	*Loading*
Factor 1: Parent-As-Disciplinarian	
1. Every child needs a good spanking once in awhile.	.71
2. Children should not question the authority of their parents.	.67
3. The most important thing to teach children is absolute obedience to parents.	.63
4. Spanking is not a very effective way to discipline a child.	-.60
5. Children should always do what their parents say, no matter what.	.57
Factor 2: Parent-As-Teacher	
1. It is up to parents to provide the child with learning experiences at an early age.	.65
2. Parents should continue to teach their children, even after the child enters school.	.65
3. A 4-year old should not be left alone in the house, even during the day.	.60
4. Parents have the most influence on the development of the child's attitudes and beliefs.	.58
5. Parents are their child's best teacher.	.53
Factor 3	
1. The main purpose of schools is to develop a child's self-confidence.	.85
2. The things a child learns at home are more important than his or her education at school.	.76
Factor 4	
1. Children are born good.	.84
2. All children are good by nature.	.84

Table 4

Comparison of Selected Items from Parenting Styles and Values Scales

Control-Oriented Parenting Styles	
Firm Control	Power-Oriented Control
There are set ways of doing things at home.	Parents make all of the important decisions in our family.
There is a strong emphasis on following rules breaking rules in our family.	There is strict punishment for in our family.
Each person's duties are clearly defined in our family.	Nobody orders anyone around in our family.
Members of our family can get away with almost anything.	Family members are severely punished for anything they do wrong.
Parental Values	
Self-Direction Values	Conformity Values
It is important for my child to think for himself.	It is important for my child to obey parents and teachers.
It is important for my child to be interested in how and why things happen.	It is important for my child to keep things neat and in order.
Disciplinarian Role Values	Teacher Role Values
Every child needs a good spanking once in awhile.	It is up to parents to provide the child with learning experiences at an early age.
Children should not question the authority of their parents.	Parents should continue to teach their children, even after the child enters school.

Table 5

Correlations between Mothers and Fathers: Values, Parenting Styles, and Perceptions of Parenting Success

Variable	Total Sample (N=121)	MR families (N=51)	Non-MR families (N=70)
Parental Values			
SDvalues	.31***	.02	.47***
Discipline Roles	.38***	.33*	.43***
Teacher Roles	.20*	.27[a]	.02
Parenting Styles			
Firm Control	.47***	.54***	.42***
Power-Oriented	.19*	.35**	.07
Family Closeness	.58***	.62***	.54***
Parenting Success			
Perceived Control	.19*	.19	.18
Self-Blame	.20*	.15	.23*

[a]=$p<.10$; *=$p<.05$; **=$p<.01$; ***=$p<.001$

Note. MR families = families with children with mental retardation, Non-MR families= families without children with mental retardation, SD values=Self-Direction Values.

Table 6

Group Differences in Control Values and Parenting Styles- Fathers

	Means and Standard Deviations				Post hoc Contrast
Variable	MR N=52	Comp N=22	BP N=17	CI N=35	Family Group
SDvalue	18.77 (7.61)	24.45 (8.21)	21.53 (8.53)	22.79 (9.06)	MR<C,CI
Discipline	12.83 (4.17)	13.23 (3.69)	14.40 (3.93)	13.60 (4.89)	ns
Teacher	21.81 (3.07)	23.23 (1.82)	22.63 (2.00)	23.20 (2.04)	MR<C,CI
Firm	12.72 (4.42)	12.45 (4.10)	11.35 (526)	12.21 (3.91)	ns
Power	11.52 (1.67)	11.62 (2.18)	12.00 (2.12)	11.41 (1.44)	ns
Closeness	14.06 (5.39)	15.19 (3.70)	11.12 (4.62)	13.97 (3.94)	BP<C,CI

Note. MR= Mental Retardation, Comp= Comparison, BP= Behavior Problem, CI= Chronic Illness.

Table 7

Group Differences in Control Values and Parenting Styles- Mothers

	Means and Standard Deviations				Post hoc Contrasts		
Variable	MR N=76	Comp N=39	BP N=39	CI N=59	Age X Group	Child Age	Family Group
SDvalue	21.18 (7.34)	21.47 (7.30)	22.38 (7.40)	21.67 (8.45)	Young: BP>C; Old: MR<C	Old > Young	ns
Discipline	13.59 (3.97)	12.23 (4.78)	14.00 (4.28)	12.93 (5.19)	Old: MR>C BP>C	Young > Old	ns
Teacher	22.50 (2.58)	22.31 (4.24)	23.79 (1.76)	23.68 (1.68)	ns	ns	MR<CI; BP>C
Firm	13.38 (3.65)	12.51 (3.71)	12.49 (4.12)	13.32 (3.83)	Old: MR>C	Young > Old	ns
Power	11.14 (2.02)	11.23 (2.30)	11.08 (1.44)	11.07 (1.52)	ns	ns	ns
Closeness	14.96 (5.08)	16.10 (3.70)	12.38 (4.26)	14.98 (4.43)	ns	ns	BP<C,CI

Note. MR= Mental Retardation, Comp= Comparison, BP= Behavior Problem, CI= Chronic Illness, SD values=Self-Direction Values, Young= 6-12 year olds, Old=13-18 year olds.

Table 8

Mother - Father Differences in Control Values and Parenting Styles

Variable	Means and Standard Deviations		Post hoc Contrasts	
	Fathers	Mothers	Parent X Gender	Parent
SD values	21.24 (8.46)	21.59 (7.63)	ns	ns
Discipline Role	13.31 (4.26)	13.23 (4.55)	ns	ns
Teacher Role	22.55 (2.55)	23.03 (2.71)	ns	Mo>Fa
Firm Control	12.34 (4.33)	13.04 (3.79)	ns	Mo>Fa
Power Control	11.57 (1.76)	11.12 (1.84)	Girls: Fa>Mo	Fa>Mo
Closeness	13.82 (4.75)	14.72 (4.64)	ns	Mo>Fa

Note. SD values=Self-Direction values, Mo= mothers, Fa= fathers.

Table 9

Zero Order Correlations between Parenting Values and Parenting Styles

	Fathers			Mothers		
Values	Firm	Power	Close	Firm	Power	Close
SD values	-.19*	.00	.09	-.13[a]	-.06	.17*
Discipline	.14	.04	-.12	.09	.17*	-.17*
Teacher	.09	.05	.20*	-.05	.05	.12[a]

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SD values=Self-Direction Values.

Table 10

Results of Regressions Predicting Parenting Styles from Parenting Values - Fathers

	Firm Control			Power-Oriented Control			Closeness		
Predictors	R^2	ΔR^2	beta	R^2	ΔR^2	beta	R^2	ΔR^2	beta
Step 1	.04			.01			.05		
Education			.20*			-.02			.22**
Gender			-.05			.11			.00
Age Group			-.06			.00			.01
MR Group			.08			-.05			.05
Step 2	.13	.08**		.01	.00		.09	.04	
SD Values			-.26**			.00			.03
Discipline			.18*			.01			-.07
Teacher			.10			.05			.20*
Step 3	.20	.07***		.12	.11**		no interactions		
AgeXTeach			.28***			...			
MRXSDval			...			.22**			
SexXDisc			...			.26**			
F-Ratio	F(8,114)=1.75^a			F(7,92)=2.06*			F(8,91)=4.45***		

^{a}=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SDval=Self-Direction Values, Teach=Teacher Role Values, Disc=Discipline Role Values.

Table 11

Results of Regressions Predicting Parenting Styles from Parenting Values - Mothers

	Firm Control			Power-Oriented Control			Closeness		
Predictors	R^2	ΔR^2	beta	R^2	ΔR^2	beta	R^2	ΔR^2	beta
Step 1	.02			.02			.06		
Education			.06			-.07			.24***
Gender			.03			-.12a			.08
Age Group			-.15*			-.06			-.05
MR Group			.05			.00			.05
Step 2	.05	..03		.05	.03		.09	.03	
SD Values			-.16*			-.03			.10
Discipline			.10			.15*			-.07
Teacher			-.02			-.10			.14*
Step 3	no interactions			.09	.03**		.11	.02*	
AgeXSDval						...			.16*
MRXTeach						.19**			...
F-ratio	F(7,188)=1.59			F(8,188)=2.39*			F(8,189)=3.08***		

a=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SDval=Self-Direction Values, Teacher Role Values.

Table 12

Zero Order Correlations between Child Adjustment and Parenting Values and Parenting Styles

	Fathers			Mothers		
	External-izing	Self-Direction	Social Respons	External-izing	Self-Direction	Social Respons.
Styles						
Firm	-.15[a]	.10	.16	-.15*	.09	.08
Power	.05	-.07	-.07	-.03	.15*	.02
Close	-.25**	.17[a]	.12	-.35***	.16*	.12
Values						
SD values	-.06	.21*	.21*	-.05	.04	.09
Discipline	.08	-.08	.01	.16*	-.15[a]	-.20**
Teacher	-.09	.08	.09	.13[a]	.06	.15*

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SD values=Self-Direction Values, Social Respons= Social Responsibility Skills.

Table 13

Results of Regressions Predicting Child Adjustment from Parenting Styles- Fathers

	Externalizing			Self-Direction Skills			Social Responsibility		
Predictors	R^2	ΔR^2	B	R^2	ΔR^2	B	R^2	ΔR^2	B
Step 1	.00			.05			.12		
Gender			.05			-.06			.00
Age Group			.02			.14			.20*
MR Group			-.02			-.21*			-.28**
Step 2	.06	.06[a]		.09	.03		.16	.04	
Firm			-.43			.87			1.22*
Power			.76			-.27			-1.53*
Closeness			-8.11***			1.59**			.36
Step 3	.07	.01		.16	.07*		.17	.01	
$Firm^2$			-.25			.79**			.36
$Power^2$			.49			-.66[a]			-.15
Step 4	.22	.15***		.21	.05*		.22	.05**	
SexXClose			10.85***			-2.00*			...
MRXPower			...			...			2.30**
F- Ratio	F(9,111)=3.58***			F(9,88)=2.53**			F(9,88)=2.76**		

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Table 14

Results of Regressions Predicting Child Adjustment from Parenting Styles- Mothers

	Externalizing			Self-Direction Skills			Social Responsibility		
Predictors	R^2	ΔR^2	B	R^2	ΔR^2	B	R^2	ΔR^2	B
Step 1	.01			.05			.09		
Gender			.05			.07			-.01
Age Group			.04			.18*			.24**
MR Group			-.07			-.13			-.24**
Step 2	.14	.13***		.11	.06*		.12	.03	
Firm			-.61			.31			.43
Power			.20			.51			-1.09[a]
Closeness			-6.71***			.53			.54
Step 3	.14	.00		.15	.04*		.14	.02	
$Firm^2$			.14			-.20			-.41
$Power^2$			.44			-.57**			-.31
Step 4	.17	.03**		no interactions			.16	.02*	
MRXClose			4.70**						...
MRXPower			...						1.59*
F- Ratio	F(9,198)=4.58***			F(8,151)=3.44***			F(9,150)=3.19***		

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Table 15

Results of Regressions Predicting Child Adjustment from Parenting Values- Fathers

	Externalizing			Self-Direction Skills			Social Responsibility		
Predictors	R^2	ΔR^2	beta	R^2	ΔR^2	beta	R^2	ΔR^2	beta
Step 1	.04			.13			.21		
Education			-.20*			.29***			.32***
Gender			.02			-.01			.02
Age Group			.10			.10			.16[a]
MR Group			-.02			-.15			-.25**
Step 2	.05	..01		.14	.01		.21	.00	
SD Values			.01			.08			.04
Discipline			.04			-.04			.04
Teacher			-.05			-.02			-.04
Step 3	.11	.06**		no interactions			.28	.07**	
SexXDisc			-.25**						...
MRXSDval			...						-.29**
F- Ratio	F(8,109)=3.36***			F(9,109)=1.73			F(7,114)=1.71		

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SDval=Self-Direction Values, Disc=Discipline Role Values

Table 16

Results of Regressions Predicting Child Adjustment from Parenting Values- Mothers

	Externalizing			Self-Direction Skills			Social Responsibility		
Predictors	R^2	ΔR^2	beta	R^2	ΔR^2	beta	R^2	ΔR^2	beta
Step 1	.08			.07			.14		
Education			-.26***			.14[a]			.23***
Gender			.02			.07			.04
Age Group			.09			.16*			.19**
MR Group			-.11			-.16*			-26***
Step 2	.11	.03a		.08	.01		.17	.03	
SD Values			.03			-.02			-.01
Discipline			.11			-.08			-.12
Teacher			.15*			.05			.12
Step 3	.15	.04***		no interactions			.19	.02*	
AgeXSDval			-.20***						...
AgeXTeach			...						-.16*
F- Ratio	F(8,190)=4.13***			F(7,149)=1.79[a]			F(8,148)=4.42***		

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SDval=Self-Direction Values, Teach=Teacher Role Values.

Table 17

Prediction of Child Adjustment from Parental Values after accounting for Demographics and Parenting Styles

	Externalizing			Self-Direction Skills			Social Responsibility		
Predictors	R^2	ΔR^2	B	R^2	ΔR^2	B	R^2	ΔR^2	B
					Fathers				
Step 4	.26	..00		.16	.01		.23	.00	
SDvalues			1.08			-.35			-.21
Discipline			2.42			-.21			-1.15
Teacher			-.22			-.21			-.35
Step 5	.30	.04*		no interactions			.27	.04*	
Sex X Disc			-1.34*						.45*
					Mothers				
Step 4	.25	.06*		.23	.03		.34	.04	
SD values			1.25			.28			-.05
Discipline			1.77			-.18			-.46
Teacher			3.36*			.34			.69
Step 5	no interactions			.33	.10**		.42	.08**	
SexXDisc						-.60***			-.57**
MRXDisc						-.53**			.47*

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Table 18

Zero Order Correlations between Parenting Outcomes and Parenting Values and Child Adjustment

	Fathers		Mothers	
	Control	Self-Blame	Control	Self-Blame
Values				
SD values	.05	-.15[a]	.04	.01
Discipline	-.11	.05	-.20***	-.02
Teacher	.23**	-.28***	-.14*	-.08
Child Adjust				
Externalizing	-.37***	.33***	-.38***	.18**
Self-Direction	.27**	-.28**	.15[a]	-.12
Social Respons.	.20*	-.26**	.06	-.19**

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SD values=Self-Direction Values.

Table 19

Predicting Parenting Success from Parental Values and Child Externalizing Behavior Problems

	Fathers						Mothers					
	Control			Self-Blame			Control			Self-Blame		
Predictor	R^2	ΔR^2	B	R^2	ΔR^2	B	R^2	ΔR^2	B	R^2	ΔR^2	B
Step 2	.10	.06[a]		.13	.10**		.04	.01		.04	.03	
SD val			.08			.14			-.12			-1.02
Discip			-.39			.53			-.39			-1.07
Teach			1.06**			-1.82***			.33			-.65
Step 3	.21	.11***		.21	.08***		.14	.10***		.12	.08***	
Extern			-1.68***			1.73***			-2.02***			1.77***
Step 4	no interactions			.24	.03*		.17	.03*		.15	.03*	
TeaXExt						1.08*			...			...
SDval X Ext						...			-.99*			...
DiscXExt						...			...			1.26*

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SD val=Self-Direction Values, Tea=Teacher Role Values. Ext=Externalizing, Disc=Discipline Role Values.

Table 20

Predicting Parenting Success from Parental Values and Child Adaptive Behavior Skills

	Fathers						Mothers					
	Control			Self-Blame			Control			Self-Blame		
Predictor	R^2	ΔR^2	B	R^2	ΔR^2	B	R^2	ΔR^2	B	R^2	ΔR^2	B
Step 2	.07	.05		.11	.09*		.06	.01		.06	.05	
SD val			.43			-.04			.29			-.99
Discip			-.41			.12			-.02			-1.19
Teach			.84[a]			-1.81**			-.61			-.13
Step 3	.14	.07*		.23	.12**		.06	.00		.10	.04	
SelfDir			1.27[a]			-.85			.52			-.54
SocRes			.06			-1.65*			-.36			-1.87[a]
Step 4	no interactions			no interactions			.12	.06**		.15	.05*	
SD val X Child SD									1.20**			...
SD val X Child SR									...			1.48*

[a]=p<.10; *=p<.05; **=p<.01; ***=p<.001

Note. SD val=Self-Direction Values, Child SD=Self-Direction Skills, Child SR=Social Responsibility Skills.

APPENDIX B

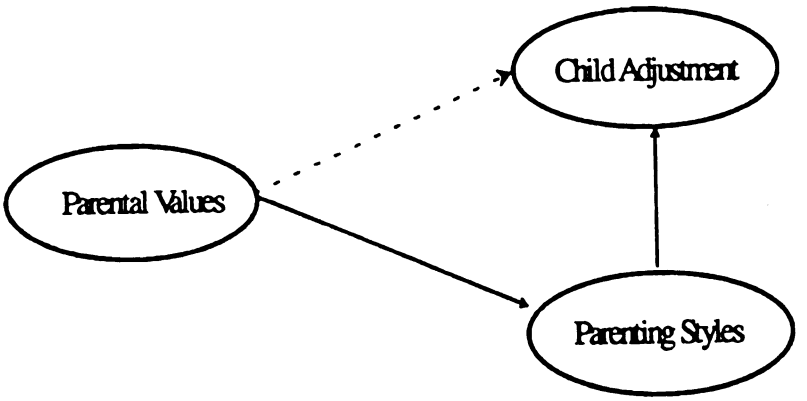

Figure 1

Proposed Mediational Model

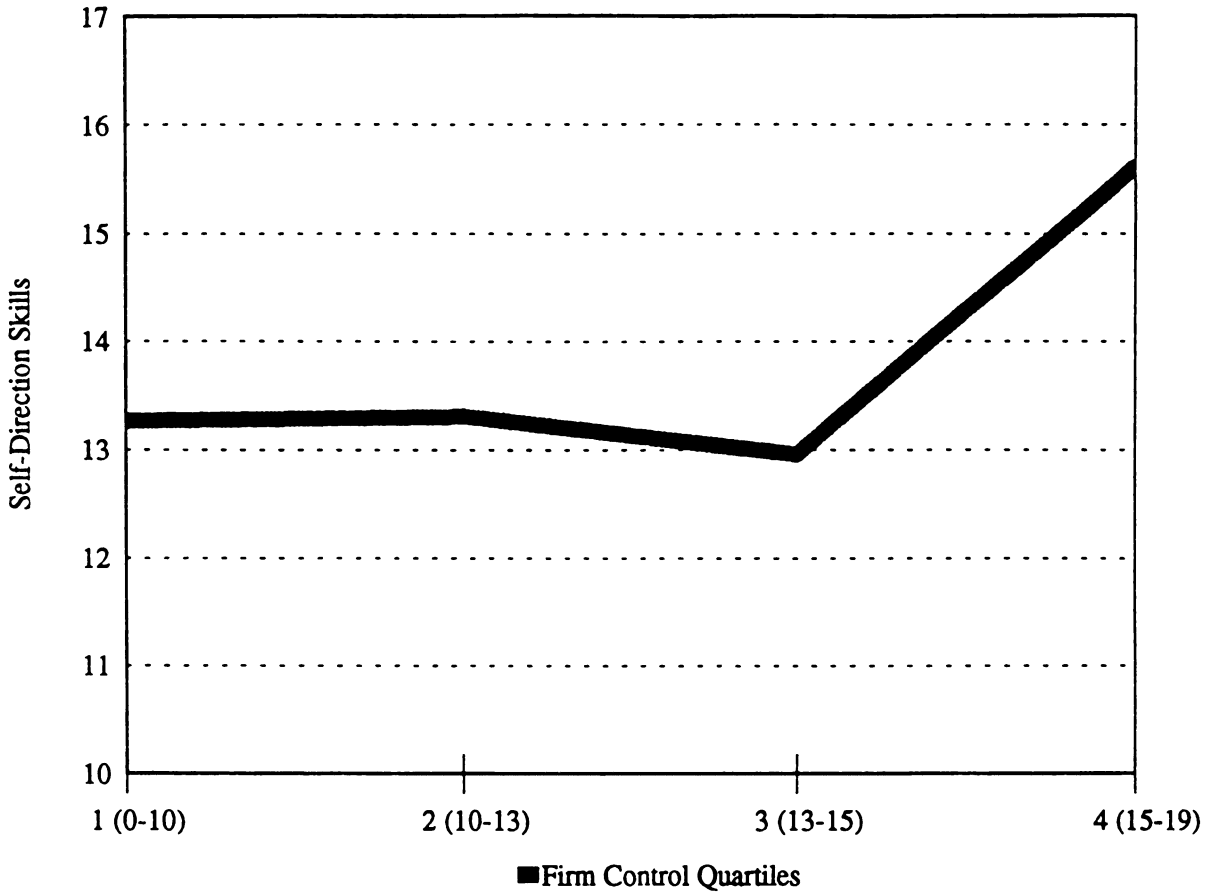

Figure 2

Fathers' Firm Control and Children's Self-Direction Skills

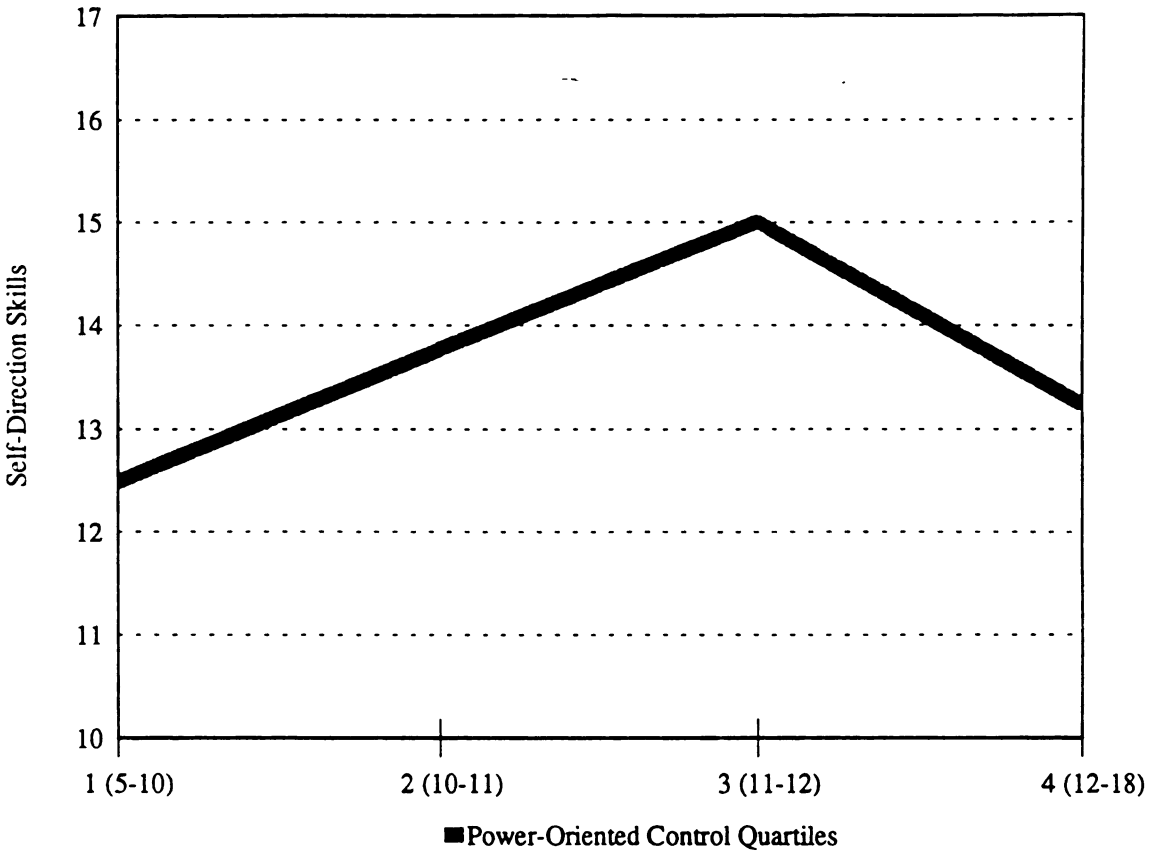

Figure 3

Mothers' Power-Oriented Control and Children's Self-Direction Skills

APPENDIX C

APPENDIX C

INSTRUMENTS

Parental Values

Role Disposition Questionnaire

Please rate the following items on a 5-point scale:

1=Strongly Disagree	2=Mildly Disagree	3=Not Sure	4=Mildly Agree	5=Strongly Agree

1. It is up to the parents to provide the child with learning experiences at an early age.
2. The main purpose of the schools is to develop a child's self-confidence.
3. The most important thing to teach children is absolute obedience to parents.
4. Every child needs a good spanking once in a while.
5. Children are naturally mean.
6. Children are naturally curious.
7. Parents are their child's best teacher.
8. A 4-year old should dress himself/herself completely, except for tying his or her shoes.
9. Parents have the most influence on the development of the child's attitudes and beliefs.
10. Children should not question the authority of their parents.
11. Children are born good.
12. A 4-year old should not be left alone in the house, even during the day.
13. Teachers at school should play a bigger part in the child's development than the parents.
14. Spanking is not a very effective way to discipline a child.
15. The basic goal of the school should be to teach children reading, writing, and arithmetic.
16. All children are good by nature.
17. Parents should continue to teach their child, even after the child enters school.
18. A 4-year old should be allowed to play outside the neighborhood without an adult.
19. A teacher should not be allowed to use physical punishment with a child.
20. Once a child enters school, all of his or her education should take place there.
21. Children should always do what their parents say, no matter what.
22. Parents should choose their child's playmates.
23. The things a child learns at home are more important than his or her education at school.
24. Children will not do the right thing unless they must.

Parental Values Scale

Instructions: For the following three sets of statements, please rank the five statements from 1 to 5 with the most important thing you want your child to learn ranked 1, the second most important thing ranked 2, and so on with the least important thing ranked 5. Give each five statements a different number.

First Set

1. It is important for my child: RANK

   a. to think for himself _____
   b. to keep himself and his clothes clean _____
   c. to be curious about many things _____
   d. to be polite to adults _____
   e. to be kind to other children _____

Second Set

2. It is important for my child: RANK

   a. to obey parents and teachers _____
   b. to be responsible for his own work _____
   c. to be kind and considerate _____
   d. to keep things neat and in order _____
   e. to use imagination _____

Third Set

3. It is important for my child: RANK

   a. to be interested in how and why things happen _____
   b. to have the ability to get along with people _____
   c. to be a good student _____
   d. to have the ability to look after himself _____
   e. to have good manners _____

Conformity Score= Sum of items 1b, 1d, 2a, 2d, 3c, 3e.
Self-Direction Score= Sum of items 1a, 1c, 2b, 2e, 3a, 3d.

Parenting Styles

Firm Control

Systems Maintenance items: (rated true or false)

1. Activities in our family are carefully planned.
2. Family members are rarely ordered around.
3. We are generally very neat and orderly.
4. There are very few rules to follow in our family.
5. It's often hard to find things when you need them in out household.
6. There is one family member who makes most of the decisions.
7. Being on time is very important in our family.
8. There are set ways of doing things at home.
9. People change their minds often in our family.
10. There is a strong emphasis on following rules in our family.
11. Family members make sure their rooms are neat.
12. Everyone has an equal say in family decisions.
13 Each person's duties are clearly defined in our family.
14. We can do whatever we want in our family.
15 Money is not handled very carefully in our family.
16. Rule are pretty inflexible in our household.
17. Dishes are usually done immediately after eating.
18. You can't get away with much in our family.

Lax Control items: (rated on a 4-point scale)

1. Members of our family can get away with almost anything.
2. It is unclear what will happen when rules are broken in our family.
3. Family members are not punished or reprimanded when they do something wrong.
4. There is strong leadership in our family.
5. It is hard to know what the rules are in our family because they always change.

Power-Oriented Control

Authoritarian items (rated on a 4-point scale)

1. Parents make all of the important decisions in our family.
2. There is strict punishment for breaking rules in our family.
3. Family members are severely punished for anything they do wrong.
4. There are very few rules in our family.
5. Nobody orders anyone around in our family.

Children's Adaptive Behavior Skills

Self-Direction Skills

A. Initiative

1. Initiative (Circle only one)

a. Initiates most of own activities (e.g., tasks, games, etc) 3
b. Asks if there is something to do, or explores surroundings (e.g., home, yard) 2
c. Will engage in activities only if assigned or directed 1
d. Will not engage in assigned activities (e.g., putting away toys, etc) 0

2. Passivity (Check ALL statements which apply)

a. Has to be made to do things _____
b. Has no ambition _____
c. Seems to have no interest in things _____
d. Finishes tasks last because of wasted time _____
e. Is unnecessarily dependent on others for help _____
f. Movement is slow and sluggish _____
None of the above ____

B. Perseverance

1. Attention (Circle only one)

a. Will pay attention to purposeful activities for more than fifteen minutes (e.g., playing games, reading, cleaning up) 4
b. Will pay attention to purposeful activities for at least fifteen minutes 3
c. Will pay attention to purposeful activities for at least ten minutes 2
d. Will pay attention to purposeful activities for at least five minutes 1
e. Will not pay attention to purposeful activities for as long as five minutes 0

2. Persistence (Check all statements that apply)

a. Becomes easily discouraged _____
b. Fails to carry out tasks _____
c. Jumps from one activity to another _____
d. Needs constant encouragement to complete tasks _____
None of the above _____

C. Leisure Time

1. *Leisure Time Activity* (Check all statements which apply)

a. Organizes leisure time on a fairly complex level (e.g., plays billiard) _____
b. Has hobby (e.g., painting, embroidery, collecting stamps or coins) _____
c. Organizes leisure time adequately on a simple level (e.g., watching television, listening to radio, etc) _____
None of the above _____

Social Responsibility Skills

I. Responsibility

A. *Personal Belongings* (Circle only one)
a. Very dependable--always takes care of personal belongings _____
b. Usually dependable--usually takes care of personal belongings _____
c. Unreliable--seldom takes care of personal belongings _____
d. Not responsible at all--does not take care of personal belongings _____

B. *General Responsibility* (Circle only one)
a. Very conscientious and assumes much responsibility--makes a special effort; the assigned activities are always performed 3
b. usually dependable--makes an effort to carry out responsibility; one can be reasonably certain that the assigned activity will be performed 2
c. Unreliable--makes little effort to carry out responsibility; one is uncertain that the assigned activity will be performed 1
d. Not given responsibility; is unable to carry out responsibility at all 0

II. Socialization

A. *Cooperation* (Circle only one)
a. Offers assistance to others 2
b. Is willing to help if asked 1
c. Never helps others 0

B. *Consideration for Others* (Check all statements which apply)
a. Shows interest in the affairs of others _____
b. Takes care of others' belongings _____
c. Directs or manages the affairs of others when needed _____
d. Shows consideration for others' feelings _____
None of the above _____

C. *Awareness of Others* (Check all statements which apply)
a. Recognizes own family _____
b. Recognizes people other than family _____
c. Has information about others (e.g., job, address, relation to self) _____
d. Knows the names of people close to him (e.g., classmates, neighbors) _____
e. Knows the names of people not regularly encountered _____
None of the above _____

D. *Interaction with Others* (Circle only one)
a. Interacts with others in group games or activity _____
b. Interacts with others for at least short period of time _____
c. Interacts with others imitatively with little interaction _____
d. Does not respond to others in a socially acceptable manner _____

E. *Participation in Group Activities* (Circle only one)
a. Initiates group activities (leader or organizer) _____
b. Participates in group activities spontaneously and eagerly (active participant) _____
c. Participates in group activities if encouraged to do so (passive participant) _____
d. Does not participate in group activities _____

F. *Selfishness* (Check all statements which apply)
a. Refuses to take turns _____
b. Does not share with others _____
c. Gets mad if he does not get his way _____
d. Interrupts aide or teacher who is helping another person _____
None of the above _____

G. *Social Maturity* (Check all statements which apply)
a. Is too familiar with strangers _____
b. Is afraid of strangers _____
c. Does anything to make friends _____
d. Like to hold hands with everyone _____
e. Is at someone's elbow constantly _____
None of the above _____

Perceptions of Parenting Success

Please rate the following statements as true for you using the following 5 point scale.

1	2	3	4	5
Strongly Disagree				Strongly Agree

Parental Control

1. I always feel in control when it comes to my child.
2. My child's behavior is sometimes more than I can handle (R).
3. Sometimes I feel that my child's behavior is hopeless. (R)
4. It is often easier to let my child have his/her way than to put up with a tantrum. (R)
5. I find that sometimes my child can get me to do things I really did not want to do. (R)
6. My child often behaves in a manner very different from the way I would want him/her to behave. (R)
7. Sometimes when I'm tired I let my children do things I normally wouldn't. (R)
8. Sometimes I feel that I do not have enough control over the direction my child's life is taking. (R)
9. I allow my child to get away with things. (R)
10. It is not too difficult to change my child's mind about something.

Parental Self-Blame

1. There is no such thing as good or bad children- just good or bad parents.
2. When my child is well behaved, it is because he/she is responding to my efforts.
3. Parents who can't get their children to listen to them don't understand how to get along with their children.
4. My child's behavior problems are no one's fault but my own.
5. Capable people who fail to become good parents have not followed through on their opportunities.
6. Children's behavior problems are often due to mistakes their parents made.
7. Parents whose children make them feel helpless just aren't using the best parenting techniques.
8. Most children's behavior problems would not have developed if their parents had had better parenting skills.
9. I am responsible for my child's behavior.
10. The misfortunes and successes I have had as a parent are the direct result of my own behavior.

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