

PARENT-CHILD INTERACTIONS WITH ADHD CHILDREN:
PARENTAL EMPATHY AS A PREDICTOR OF CHILD ADJUSTMENT

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Parent-child interactions tend to be problematic among families of children diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD). Although much attention has been paid in research and therapy to negative cycles of interaction between parent and child, it is equally important to consider how positive family interactions can be promoted, as these are likely to help prevent or reduce behavior problems and facilitate the best possible outcomes for children. Major contributors to the fields of psychology and child therapy have postulated that parental empathy is of primary importance in facilitating healthy child personality development. However, the effect of parental empathy has not been systematically studied with ADHD children. Thus, this study investigated the relationship between parental empathy and child adjustment factors in children with ADHD. It was hypothesized that among parent-child dyads with ADHD children, higher levels of parental empathy would predict higher levels of child self-esteem, social skills, and compliance, and lower levels of child aggression.

Participants were 56 children who were previously diagnosed with ADHD and their parent/guardian. Thirty-seven parent-child dyads served as a control group. The study included parent-child participation in a videotaped analogue observation procedure and completion of parent-, child-, and teacher-report measures. Results indicated that higher levels of parental empathy predicted higher child self-esteem regarding their relationships with their parents. Before bonferroni adjustment, parental empathy also predicted lower levels of aggression among ADHD children. Parental empathy did not

predict peer acceptance or compliance for these children. Children of high empathy parents scored higher on peer acceptance and lower on child aggression measures than children of low empathy parents. Scores on self-esteem and compliance, however, did not differ across groups. Although there were no differences between ADHD and non-ADHD children on self-esteem, peer acceptance, or compliance measures, children with ADHD were significantly more aggressive. These results suggest the importance of interventions for ADHD children that focus on increasing parental empathy in parent-child interactions.

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CHAPTER 1

Introduction

Parental empathy plays a highly significant role in a child's life, as an empathic home environment nourishes the child's emotional needs and cultivates a climate for growth and development (Kohut, 1977; Rogers, 1939, 1951). This type of climate may be especially important for children who experience behavioral and emotional difficulties, such as those related to Attention-Deficit/Hyperactivity Disorder (ADHD). ADHD is a chronic mental health disorder characterized by abnormally high levels of inattention and/or hyperactivity-impulsivity (American Psychiatric Association [APA], 1994). It is one of the most common behavior disorders of childhood, with a prevalence rate of 3% to 5% of the school-age population, occurring four to nine times more often in boys than in girls, depending on the sample (i.e., community or clinical population) (APA). Researchers and clinicians suggest this disorder has a profound and pervasive effect on many areas of the child's functioning, including performance and behavior in school, relationships with parents and siblings, and peer relationships (Barkley, 1997; Barkley, Anastopoulos, Guevremont, & Fletcher, 1992; Pelham, Wheeler, & Chronis, 1998). Thus, parenting children with ADHD often presents a considerable challenge.

Many studies have focused on the manner in which the inattention, impulsivity, and overactivity commonly seen in children with ADHD is related to the way in which they interact with their parents and how parents respond to them. Evidence indicates that

not only are hyperactive children more negative and less compliant to parental instructions, but parents of ADHD children are also more negative, controlling, and disapproving (Barkley, Fischer, Edelbrock, & Smallish, 1991; Cunningham & Barkley, 1979; Gomez & Sanson, 1994). In addition, parents of children with behavior problems have demonstrated a lack of empathy, warmth, and involvement with their children (East, 1991; Pettit & Bates, 1989; Stormshak, Bierman, McMahon, & Lengua, 2000). Without these key parenting elements, the child's emotional development may be at risk. Thus, the purpose of this study was to examine the relationship between parental empathy and child adjustment factors in children with ADHD. This relationship would support the need for parent training interventions that emphasize the importance of enhancing parent relational skills, such as the expression of empathy. A review of the literature is presented, including the importance of parental empathy in child adjustment, an overview of ADHD diagnostic criteria, the relationship between parental attitudes and ADHD, and implications for interventions. Finally, the present study is discussed, outlining the statement of the problem, hypotheses, method, and results. Directions for future studies and treatment implications are also discussed.

Parental Empathy and Child Adjustment

“The child that is to survive psychologically is born into an empathic-responsive human milieu just as he [*sic*] is born into an atmosphere that contains an optimal amount of oxygen if he is to survive physically” (Kohut, 1977, p. 85). Comparing a child's need for empathy to his or her need for oxygen implies the crucial role of parental empathy in fostering healthy child psychological development. Likewise, Carl Rogers (1939), the

founder of client-centered therapy, asserted that one of the most vital human needs is the need for affectional response from others, especially one's parents.

According to Rogers (1951), as children interact with the environment, they develop concepts about the self, the environment, and the self in relation to the environment. This suggests that because young children spend a great deal of time interacting with their parents, the child's concept of self is largely influenced by parent-child interactions. In fact, one of the most fundamental aspects of the child's self-experience is that the child perceives love from his or her parents, which allows children to perceive themselves as lovable and worthy of love (Rogers, 1951). In this way, parental attitudes and behaviors toward the child are important in the child's developing view of self. For example, whereas a child may interpret the joyful, prideful parental behaviors as acceptance of the child, he or she may perceive the parent's lack of interest as rejection of him or herself (Kohut, 1977). Further, the degree of perceived affection from parents has a profound effect on the child's behavior. For example, a child who experiences parental rejection is likely to develop problem behaviors (Rogers, 1939). To illustrate the important influence of parental behavior and attitudes on child behavior, Rogers (1939) stated, "If we were to gamble on the outcome of treatment in the case of a problem or delinquent child and had to base our gamble on one item alone, we would do best to disregard the child entirely and investigate simply the way in which the parents behave toward the youngster and the attitudes which they hold toward him [*sic*]" (p. 182).

One way children perceive parental love and affectionate attitudes is through their parents' expressions of empathy. Empathy is the ability to perceive the world as another

person sees it and to sense the feelings and personal meanings that the individual is experiencing (Rogers, 1961). Empathic understanding involves knowing what it feels like to be another person and accepting these feelings, without wanting to analyze or judge the person. Acceptance means having warm regard for an individual and valuing him or her no matter what their condition, behavior, or feeling state. It also means having a respect for the individual as a separate person and a regard for their attitudes of the moment, no matter how negative or positive. This unconditional acceptance provides a climate of safety, as the child learns that he or she is regarded as an individual of worth no matter what he or she does. As a result, children become more accepting of themselves and develop more positive attitudes toward themselves. Thus, empathy and acceptance promote psychological growth and the development of emotional security within oneself (Rogers, 1961).

Parental warmth not only provides a sense of emotional security for the child, but it also sets the stage for the child's own development of empathy and emotional responsiveness to others (Borduin, Schaeffer, & Heiblum, 1999; Rogers, 1961). The child's development of empathy may be advantageous not only for the child, but also for those who interact with the child. For example, learning to become empathic and responsive toward family members may help to improve family cohesion and communication (Rogers, 1961). When the child feels accepted and understood, he or she becomes less defensive so that he or she can listen to and understand other family members, which results in less conflict. In an empathic environment, individuals are not only able to express themselves more freely, but they are also more willing for others to

be themselves. Thus, the family circle becomes a group of separate and unique persons with individual goals and values, but bound together by the satisfying bond of mutual understanding (Rogers, 1961).

Because empathic emotions motivate parents to improve the child's sense of well-being, they may be critical to responsive parenting (Dix, 1992). In a theoretical article, Wiehe (1997) suggests a positive relationship between empathy and prosocial behaviors that parenting requires, such as understanding another's perspective, being able to give comfort, being helpful and cooperative, valuing the welfare of another, perceiving another's needs, and showing sensitivity to those needs. Parents must be continuously in tune with the child's needs to enable the child to grow emotionally (Campbell, 1977; Kohut, 1987). Campbell described these needs as an "emotional tank," which the parent must fill regularly through love, understanding, and discipline (p. 37). Children can only reach their greatest potential when their emotional tank is full, and failure to provide empathy may affect appropriate development of the child's sense of self and cause severe psychological trauma (Campbell; Kohut). Children need emotional sharing with their parents, and when parents are not physically and emotionally available, the child experiences great stress (Landreth, 1991). The absence of the parents' empathic responses to the child's needs may result in serious developmental problems and psychopathology. The child may experience emotional difficulties that prevent him or her from making developmental progress, which may affect the child later in life (Kohut, 1977). Moreover, even the deprivation of basic physical needs may not be psychologically harmful as long as the parent displays consistent empathic

responsiveness (Kohut, 1977). Kohut paraphrased the *Old Testament* when he wrote, “Man [sic] does not live by bread alone,” implying that the need for an empathic environment is as important as the need for food (1977, p. 87).

Researchers agree that parents who facilitate healthy child development are empathic toward their children. In the literature, parental empathy is described in a variety of ways, including parental support, involvement, warmth, synchrony, attunement, and responsiveness. Numerous studies provide evidence for the relationship between these empathic parental characteristics and child adjustment with a variety of child populations. Kaufmann et al. (2000) suggested that authoritative parenting, which involves more democratic parenting strategies and acceptance of the child, may be a key determinant of children’s adjustment. Studies found that parental authoritativeness, as well as warmth, affection, and positive involvement have been negatively associated with child emotional and behavioral problems and positively associated with healthy adjustment (Kaufmann et al.; Patterson, Cohn, & Kao, 1989; Russell & Russell, 1996). In addition, mothers’ abilities to support the child, demonstrate positive emotion, and allow autonomy were predictive of children’s social-emotional competence (Denham, Renwick, & Holt, 1991). Likewise, fathers’ ability to provide warmth in interactions with their children was significantly associated with children’s higher perceived academic competence (Wagner & Phillips, 1992). In contrast, mothers’ inability to regulate hostility toward the child and to interact with positive emotion predicted the child’s withdrawn, ineffectual engagement with peers. Moreover, among children who have been rejected by their peers, children whose interactions with their mothers were also low in

warmth were rated by teachers as having more behavior problems than other rejected children (Patterson et al.). According to Patterson et al., the experience of peer rejection may be less overwhelming for children whose mothers are warm and affectionate. Thus, high maternal warmth, indicated by involvement, responsiveness, and expression of positive feelings, may serve as a protective factor against adjustment difficulties associated with peer rejection.

Empathic parenting also has been associated with positive outcomes among adolescent populations. Studies found that parent-child synchrony was strongly predictive of adolescent emotional adjustment factors, including less anxiety, hyperactivity, emotionality, and somatization (Barber, Bolitho, & Bertrand, 2001; Snow, 1995). Specific factors most likely to optimize adolescent development were warm, supportive family environments with the presence of at least one parent capable of taking the child's perspective (Barber et al.). Adolescents who had highly empathic parents and who perceived that their parents understood them had significantly healthier self-concepts, with lower levels of anxiety, dissociation, and depression than adolescents whose parents were low in empathy and who did not perceive their parents as understanding them (Snow, 1995). Furthermore, adolescents' self-esteem is significantly influenced by their perceptions of parental warmth, suggesting that parental warmth plays an important role in determining how adolescents assess their self-worth (Motley, 1986).

Parental empathy not only affects child emotional development and adjustment, but it also impacts parents' choice of discipline strategies. An investigation of the role of empathy in parenting strategies found that participants scoring higher on the empathy

measure were less likely to endorse physical punishment as an appropriate choice of parenting intervention (Brems & Sohl, 1995). In addition, a positive relationship existed between self-reported empathy and the use of rewarding parenting strategies, suggesting that empathy is likely to result in more benevolent parenting choices. Furthermore, early supportive parenting practices, such as use of calm discussion in disciplinary encounters with their children, interest and involvement in their children's peer contacts, and proactive teaching of social skills, have demonstrated positive long-term effects for children (Pettit, Bates, & Dodge, 1997). High levels of supportive parenting for children evaluated at pre-kindergarten predicted better child adjustment in both kindergarten and grade 6, especially regarding externalizing problems and academic performance.

Externalizing problems were predicted by low levels of calm discussion and proactive teaching in disciplinary encounters, whereas better academic performance was predicted by high levels of warmth and involvement and low levels of harsh discipline. The authors suggest that warmth may have special significance for children's developing academic capabilities because it provides a foundation on which children develop positive views of themselves and their competence. These studies of parental caregiving patterns emphasize the importance of the parent being in tune with, rather than in opposition to, the child and the child's needs.

Overview of Attention Deficit/Hyperactivity Disorder (ADHD)

Parental empathy may be especially critical in families of children with ADHD, who often experience various behavioral problems (Stormshak et al., 2000). The behaviors that are essential to the diagnosis of ADHD include inattentiveness and/or

hyperactivity-impulsivity that are more frequent and severe than is typically observed in individuals at a comparable level of development (APA, 1994). Although most individuals display symptoms of both inattention and hyperactivity-impulsivity, the Diagnostic and Statistical Manual of Mental Disorders (4th edition) (DSM-IV) distinguishes between predominant ADHD symptom patterns: 1) Inattentive Type, 2) Hyperactive-Impulsive Type, and 3) Combined Type. Some hyperactive-impulsive or inattentive symptoms must have been present before age 7 years, and impairment from these symptoms must be present in at least two settings (e.g., home or school) for at least 6 months to receive a diagnosis of ADHD (APA).

Children classified as “ADHD, Predominantly Inattentive Type” (ADHD/I) may be unable to sustain their attention and persist with tasks until completion (APA, 1994). These children may have difficulties concentrating on one task, paying attention to details, listening, following directions, completing schoolwork, and organizing tasks and activities. In addition, these children may be easily distracted by irrelevant stimuli and forgetful in daily activities. As a result, these children often avoid, dislike, or are reluctant to engage in activities that demand sustained self-application and mental effort (APA). Children classified as “ADHD, Predominantly Hyperactive-Impulsive Type” (ADHD/HI) display excessive motor activity and impulsive behavior. These children may exhibit fidgetiness, impatience, excessive running or climbing in situations where it is inappropriate, excessive talking, frequent interrupting or intruding on others, and difficulty engaging quietly in leisure activities. The DSM-IV describes these children as acting as if “driven by a motor” (APA, p. 84). Children who exhibit symptoms of

inattention, impulsivity, and hyperactivity are classified as “ADHD, Combined Type” (ADHD/C). For a complete list of the ADHD diagnostic criteria in the DSM-IV, please see Appendix A, Table 1.

ADHD and Child Adjustment

In addition to the primary symptoms of inattention, impulsivity, and hyperactivity, children with ADHD may experience other difficulties. The *DSM-IV* describes numerous problems often associated with ADHD, including low frustration tolerance, temper outbursts, bossiness, stubbornness, excessive and frequent insistence that requests be met, mood lability, demoralization, dysphoria, rejection by peers, and poor self-esteem (APA, 1994). Likewise, hyperactive children have been found to have more conduct, learning, personality and emotional problems than normal children (Barkley et al., 1991; Befera & Barkley, 1985). In a survey of parents of children with ADHD, a large number of parents indicated that they felt concerned about their children’s academic ability (43%), self-esteem (40.9%), future adjustment (39.1%), and lack of social skills (32.7%; Kottman, Robert, and Baker, 1995). Children with ADHD have greater interpersonal deficits, including higher levels of poor conversation skills (Gizzo, 2001; Greene et al., 2001). Also, in a theoretical article, Barkley (1997) suggested that ADHD children may be at greater risks for low academic achievement, poor school performance, retention in grade, school suspensions and expulsions, poor peer and family relations, anxiety and depression, aggression, conduct problems and delinquency, early substance experimentation and abuse, and driving accidents and speeding violations. Others have evidenced the relationship between ADHD and alcohol and tobacco use

(Burke, Loeber, & Lahey, 2001; Whalen, Jamner, Henker, Delfino, & Lozano, 2002).

Thus, it appears that children with ADHD display a variety of behavioral problems and related social, academic, psychological, and familial difficulties.

Parenting Children with ADHD

Given the numerous attentional and behavioral symptoms ADHD children exhibit, including frequent displays of noncompliance, these children typically impose increased care taking demands on their parents (Barkley et al., 1992; Whalen & Henker, 1999). As a result, parenting children with ADHD may present a considerable challenge. Mothers of children with ADHD, compared with mothers of nondiagnosed children, report higher levels of psychological distress and marital dissatisfaction (Barkley et al., 1992; Befera & Barkley, 1985; Kottman et al., 1995). Also, mothers of boys with ADHD are more likely to have a major depressive episode and/or marked anxiety symptoms than comparison mothers (Brown & Pacini, 1989; Nigg & Hinshaw, 1998).

Parents of children with ADHD report that having a child with ADHD adversely affects their parenting and their families (Camparo, Christensen, Buhrmester, & Hinshaw, 1994; Kottman et al., 1995). For example, in comparison to parents of nondiagnosed children, parents of children with ADHD tended to perceive their family environments as less supportive and more disturbed in interpersonal relationships. (Brown & Pacini, 1989). Further, families of ADHD children had less perceived cohesiveness, as they participated in fewer activities as a family. In addition, parents of ADHD boys reported that their sons' problems distracted them from other family and marital concerns more than that reported by parents of the comparison group (Camparo et al.). Cohen (1998)

hypothesized that all families that include a child with ADHD experience an alteration in their communication patterns and dynamics, in addition to stress on family resources. Cohen suggested that parents' emotional resources become drained due to continuing confusion about the appropriate way to manage the child and criticism of the child by others. Since the ADHD child often monopolizes a significant amount of family time, other family relationships, such as the marital relationship, can also become strained (Cohen).

In addition to decreased family functioning with ADHD children, investigators consistently report increased parenting stress among these families. Further, higher levels of parent stress has been associated with child behavior and dysfunctional parent-child interactions (DuPaul, McGoey, Eckert, & VanBrakle, 2001). Vitanza and Guarnaccia (1999) developed a model of psychological distress for mothers of children with ADHD, which suggested that the child's challenging behaviors were the strongest indicator of parenting stress. Further, the severity of the child's ADHD symptoms may be a significant predictor of overall parenting stress (Anastopoulos, Guevremont, Shelton, & DuPaul, 1992). In a study of the effects of deviant child behavior on parental distress, 60 parents of normal children interacted with boys trained to enact behaviors characteristic of either "normal" children or "deviant" children with ADHD, conduct disorder, and oppositional defiant disorder (Pelham et al., 1997). In comparison to children behaving "normally," interactions with deviant confederates were rated as more than 13 times more unpleasant, which resulted in feelings of parental inadequacy and produced significantly more anxiety, depression, and hostility. After the interactions, parents were given the

opportunity to drink as much of their preferred alcoholic beverage as they desired while anticipating a second interaction with the same child. Parent participants in the study consumed significantly more alcohol following interactions with deviant confederates than normal confederates. However, interpretation of the results may not generalize to parents of children with ADHD, who interact in a more naturalistic environment (rather than a laboratory setting) on a daily basis.

Families of children with ADHD report less adaptive coping styles (DuPaul et al., 2001). A comparison study of mothers with and without ADHD children found that mothers with ADHD children tended to use more “indirect coping” strategies, including seeking support from others and using avoidance techniques to cope with parenting (Bailey, Barton, & Vignola, 1999). In addition, relative to parents of nondiagnosed children, parents of ADHD children are less capable of redefining stressful events to make them more manageable (DuPaul et al.). Further, the frequency of using coping strategies was significantly higher for mothers of children with ADHD, indicating that the need to continually monitor, manage and cope is likely to require more physical and psychological resources.

Having a child with ADHD is not only related to higher parental and familial distress, but parent-child interactions are also adversely affected when the child has ADHD. Parents have described hyperactive children as less compliant and generally more negative in parent-child interactions than normal children (Befera & Barkley, 1985; DuPaul et al., 2001; Gomez & Sanson, 1994). Specifically, hyperactive children and adolescents were rated by their mothers as having more negative communication patterns,

more conflicts with each other, more numerous and intense family conflicts, and a greater intensity of anger during those conflicts than those of normal controls (Barkley et al., 1991; Barkley et al., 1992). In addition, hyperactive boys tend to resist and avoid parents' attempts to channel their behavior and display more aversive behaviors toward parents more often than nonhyperactive boys, especially during problem-focused family discussions and task-oriented situations (Buhrmester, Camparo, Christensen, Gonzalez, & Hinshaw, 1992; Tarver-Behring, Barkley, & Karlsson, 1985).

Parental Empathy with ADHD Children

Due to the significant stress that families of ADHD children often experience, it may be especially difficult for these parents to provide a consistently empathic home environment. Mothers of children with behavior problems have been found to be more negative, impatient, and controlling in interactions with their children than comparison mothers (Campbell, March, Pierce, Ewing, & Szumowski, 1991; Cunningham & Barkley, 1979). For example, compared to mothers of children without behavior problems, mothers of hyperactive boys provide fewer positive responses and spend significantly more time attempting to control, direct, or restructure their children's activities, rather than encouraging the child's independence (Cunningham & Barkley, 1979). In fact, parents of children with ADHD exhibited negative behavior toward their children three times more frequently than parents of nondiagnosed children, particularly when asking their children to complete tasks (DuPaul et al., 2001). In addition, parents of hyperactive adolescents have been found to use more punitive child rearing approaches than parents of normal control adolescents (Barkley et al., 1991; Hechtman, 1981). More specifically,

Barkley et al. (1991) found that mothers of hyperactive adolescents were more directive, insulting, and defensive during a conflict discussion with their teens, relative to normal mother-adolescent dyads. Also, mothers of hyperactive children and adolescents with conduct problems have been described as more controlling, less rewarding, and more negative than mothers of hyperactive boys without conduct problems and mothers of boys in the control group (Barkley et al., 1992; Campbell, Pierce, March, & Ewing, 1991; Gomez & Sanson, 1994). Specifically, mothers of adolescents with ADHD and Oppositional Defiant Disorder (ODD) held more extreme and unreasonable beliefs about the actions of their adolescents than did control group mothers, as they attributed “ruinous outcomes and malicious intent” to the conduct of their adolescents (Barkley et al., p. 283). In these studies, maternal negative behavior was strongly associated with child noncompliance. In another study, parents’ feelings of hostility and anger and their use of harsh and aggressive discipline methods were significantly associated with child hyperactivity, even after controlling for the confounding effects of child conduct problems (Woodward, Taylor, & Dowdney, 1998). Furthermore, even when children were complying with requests, mothers of hyperactive children have been found to respond with more control and negative behavior than mothers of children without behavioral problems (Befera & Barkley, 1985).

Maternal negativity in parent-child interactions may have a significant influence not only in the development, but also in the maintenance of conduct problems in hyperactive children (Gomez & Sanson, 1994; Heller & Baker, 2000). In a follow-up study of 120 children, negative maternal behaviors in a brief interactive task with their

preschool children were predictive of subsequent child adjustment. Specifically, child symptoms and diagnoses of ADHD and ODD in third grade were predicted by mothers' negative responses to their children at preschool age (Heller & Baker, 2000). In another study, measures obtained one to two months following parent-child interactions suggested that maternal negativity predicted both child noncompliance during naturalistic classroom and playground activities and stealing during a laboratory assessment (Anderson, Hinshaw, & Simmel, 1994). These findings remained significant even after the child's interactional negativity was statistically controlled.

Other investigators have suggested that differences in parenting behavior between mothers of children with and without externalizing behavior problems lie not so much in the content of discipline strategies they use, but in their timing and consistency (Gardner, Sonuga-Barke, & Sayal, 1999; Nigg & Hinshaw, 1998). Whereas control group mothers planned ahead to help the child deal with a difficult task, mothers of children with conduct problems and/or hyperactivity reacted to problem behavior as it arose, suggesting that anticipatory strategies may have significant effects in preventing conflict (Gardner et al.). However, the behavioral demands of hyperactive children may make it more difficult for parents to identify and predict problematic situations in advance (Woodward et al., 1998). Alternatively, because parents of hyperactive children are less efficient in their management of child behavior, opportunities for conflict arise which might have been avoided otherwise (Woodward et al.).

According to Mash and Johnston (1990), mothers' beliefs about their effectiveness in child-rearing situations likely influences the way in which they process

and attend to information, the amount of effort they devote to child rearing, and their emotional reactions to child behavior and parenting. Parents of children with ADHD likely become frustrated when their children disobey, talk back, and resist discipline, and they may perceive their children as difficult to influence (Jenson, Green, Singh, Best, & Ellis, 1998; Roberts, Joe, & Rowe-Hallbert, 1992). Therefore, they may have developed a sense of helplessness regarding their parenting efficacy, as they see little relationship between their parenting efforts and the resulting behavior of their children (Jenson et al.). This parental attitude may exacerbate oppositional child behavior, as the parent may allow the child to be coercive, based on the belief that the child cannot be influenced anyway (Roberts et al.). Thus, it seems that parents' perceptions of child behavior, attributions for child behavior, and parenting self-efficacy influence parent-child interactive stress in families of hyperactive children (Mash & Johnston).

Whereas most research on parental correlates of child behavior problems has focused on the role of negative parenting attitudes and strategies, some researchers have suggested that the absence of positive parental behaviors may also be related to behavior problem development (Pettit & Bates, 1989; Stormshak et al., 2000). Specifically, low levels of parental warmth and positive, affectionate involvement may be related to oppositional and aggressive behavior in children. Mothers of "hard to manage" children were found to be less involved and focused on their children's activities than control group mothers (Brophy & Dunn, 2002). In addition, aggressive boys tend to perceive less warmth, support, and satisfaction within their relationships with parents than did withdrawn or sociable children (East, 1991). This lack of support and involvement may

reflect an absence of connectedness in communication and understanding of the child's interests, thoughts, and desires (Brophy & Dunn).

Not only is the absence of parental empathy, warmth, and involvement related to child behavior problems, but the presence of these positive parenting traits has been correlated with the lack of problem behavior (Cunningham & Barkley, 1979; Gardner, 1994; Pettit & Bates, 1989; Russell & Russell, 1996). In comparison to mothers of hyperactive children, mothers of normal children more frequently praised, talked with, or questioned their child regarding his or her play or task-related activities, and they were also more responsive to their children's suggestions and questions (Cunningham & Barkley; Gardner). In a meta-analysis of 47 studies of parental caregiving and child externalizing behavior, caregiving variables such as approval, guidance, synchrony, and absence of coercive control were negatively associated with child externalizing behavior (Rothbaum & Weisz, 1994). Likewise, parental warmth and positive involvement have been positively associated with lower levels of child misbehavior and aggression and higher levels of prosocial problem solving (Domitrovich & Bierman, 2001; Russell & Russell). In fact, these positive parenting behaviors were more strongly related to child behavior problems than were intrusive parenting behaviors, such as negative reactions to the child and commands to stop or correct the child's behavior. In addition, positive long-term effects of early supportive parenting practices have been demonstrated for children (Pettit, Bates, & Dodge, 1997). Specifically, parents' use of calm discussion in disciplinary encounters and proactive teaching of social skills in pre-kindergarten predicted lower child externalizing problems in both kindergarten and grade 6. These

results suggest that parents who rely on calm, preventative discipline practices may instill a belief in their children that disputes can be resolved through nonaversive means. “By displaying warm and supportive behaviors toward their children, parents provide models of empathic and sensitive social behavior, eliciting similar prosocial behaviors from their children” (Domitrovich & Bierman, p. 253). Thus, parents who are accepting of and responsive to their children’s needs are likely to have children who are more motivated to seek control in appropriate ways (Rothbaum & Weisz, 1994).

Parental expressions of interest and attention likely reward and strengthen appropriate child behavior (Cunningham & Barkley, 1979; Pettit & Bates, 1989). In addition, positive parental behavior likely creates a positive affective bond between the parent and child so that when control is used by a parent, it is more effective (Pettit & Bates). Positive parental involvement may also lower the incidence of the child’s problem behavior because the child is more positively occupied, and thus does not need to seek attention through negative behavior. On the other hand, uninvolved parents likely ignore the child’s need for affection and nurturance, which may result in attention-seeking negative behaviors as well as angry and hostile reactions toward others (East, 1991).

When disciplined by parents who provide sufficient empathy and reassurance, the child will learn that the parent can disapprove of his or her behavior while remaining emotionally supportive and available (Ladnier & Massanari, 2000). However, when the discipline is coercive, abusive, or rejecting, the child is apt to feel shamed and threatened, and these feelings are thought to cause difficulties in attachment. Ladnier and Massanari

described the following cycle of conflict between parents and children with ADHD, which is maintained by a lack of parental empathy:

Lacking the capacity for self-soothing, impulse control, and expression, the child attempts to connect with the parent through intrusive, demanding, attention-seeking behaviors. The parent begins to feel irritation and resentment but is unable to express empathy, affection, or respect for the child and responds by criticizing, threatening, or hitting him or her. The child reacts by tuning the parent out and silently planning his or her revenge or he or she becomes defiant and coercive and raises the level of acting-out behaviors. At this point the parent, feeling angry and scared, either gives up and withdraws or raises the level of conflict in an effort to defeat the child (pp. 45-46).

As a result of the conflict, both the parent and child are left feeling frustrated and angry, and the negative parent-child interaction pattern continues. In sum, both researchers and theorists agree that empathy is an important parental trait that influences parent-child relationships, as well as many aspects of child adjustment.

Significance of Child and Parent Influences

While the literature suggests that parent-child interactions with ADHD children are problematic, investigators disagree on whether parent-child conflicts can be attributed more to poor parental management or to problematic child behavior (Barkley et al., 1992; Rothbaum & Weisz, 1994; Whalen & Henker, 1999). Due to the correlational nature of most existing research, the direction of causality cannot be established. However, some investigators speculate that it may be the inattentive, impulsive, and generally immature

self-regulatory behavior seen in ADHD that increases conflicts between ADHD children and their families (Barkley et al., 1992; Hechtman, 1996; Winsler, 1998). This implies that the negative parent-child interaction is a result of the child's ADHD symptomatology, rather than the parenting style. Whalen and Henker (1999) also suggest that even though parent-child relationships are generally influenced by bidirectional processes, ADHD can be considered a "special case" in that this disorder imposes more than the usual challenges and demands on caregivers. Conflict in parent-child relationships has been associated with the severity of ADHD behavioral symptoms, and maternal responsiveness has been more closely related to the child's conduct problems than ADHD symptoms (Johnston, Murray, Hinshaw, Pelham, & Hoza, 2002; Smith, Brown, Bunke, Blount, & Christophersen, 2002). Although the direction of these relationships was not determined, it may be harder for mothers to be responsive to children who are more oppositional and difficult to manage (Johnston et al.). Further, a study of stimulant drug effects on mother-child interactions found that mothers gave fewer commands to their hyperactive children and were less controlling of their compliance when the children took medication as compared to placebo (Barkley, 1989). Following administration of stimulant medication, mothers also increased their levels of observation and nondirective interactions with their hyperactive children, indicating that some parenting behavior may be a reaction to the child's inability to maintain adequate attention and compliance. These shifts in maternal behavior may provide significant reinforcement to the positive changes in child behavior achieved by the medication (Barkley, 1989; Danforth, Barkley, & Stokes, 1991).

Although many investigators propose that the child's hyperactive behavior produces negative parent-child interactions, studies of parental caregiving patterns with behavior-problem children often conclude that parent behavior influences child behavior (e.g., Rothbaum & Weisz, 1994). However, rather than blaming the parent or child, it is important to view the parent-child interaction as a reciprocal or recursive process (Barkley, 1985; Mash & Johnston, 1990; Woodward et al., 1998). According to Mash and Johnston, the child and parent both contribute to parent-child interactional stress, as "both parents and children are victims as well as architects of conflicted relationships" (p. 314). Problematic behaviors of hyperactive children, such as poor sustained attention, overactivity, and distractibility may present challenges for parents that influence their ability to parent effectively and may further contribute to the persistence and worsening of hyperactive behavior problems (Befera & Barkley, 1985; Woodward et al., 1998). For example, whereas noncompliant behavior displayed by hyperactive children may elicit greater control reactions from their mothers, the mothers' reactions may exacerbate the children's problems with self-control (Befera & Barkley). Essentially, parents and children train each other, via contingencies of negative reinforcement, to respond in an increasingly negative manner (Anderson et al., 1994; Barkley; Patterson, 1982; Strand, 2000).

Patterson (1982) developed the coercion theory of family interaction, which explains the negative reinforcement pattern in interactions of hyperactive children and their parents. Coercion theory proposes that children develop or continue aggressive or negative behavior because it is negatively reinforced. For example, children typically

exhibit negative behaviors such as whining, tantrums, aggression, in response to parental or situational demands. By successfully escaping or avoiding the aversive demands, the child's behavior is negatively reinforced and will likely occur again in response to future demands. Similarly, parents also may be negatively reinforced for their own coercive behavior toward such a child. For example, if the child is displaying a tantrum or other unpleasant behavior, parents may react to this with reprimands, yelling, and physical discipline. If the parent succeeds in getting the child to stop the tantrum, the parent's behavior is thereby negatively reinforced and will occur again when the child emits aversive behavior (Patterson). However, the price for this short-term reward is paid for in the form of an increased likelihood and persistence of future child behavior problems (Strand, 2000). In this manner, the development of child problematic behavior and negative parental style is reciprocally deterministic (Anderson et al., 1994; Barkley, 1985; Patterson).

Mash and Johnston (1990) proposed a model of parent-child interactive stress with families of hyperactive children, which includes direct pathways for the influences of child, environmental, and parental characteristics on the parent-child interaction, with parental characteristics mediating effects from child and environment (see Appendix B). Child characteristics, such as the inattentive, impulsive, overactive, and defiant behaviors, serve as a direct contributor to the interactive stress in families of hyperactive children (Mash & Johnston). The presence of a child with ADHD may contribute to family stress, for example, by increasing the likelihood of parental disagreement over childrearing or creating difficulties maintaining stable child care (Campbell et al., 1991).

Parents under stress may also be more impatient and angry with their children, leading to the use of more negative and controlling parenting strategies, such as using more commands, threats, and punishments (Befera & Barkley, 1985; Buhrmester et al., 1992; Campbell et al.).

The parent-child interactive stress in families of hyperactive children may be related to both short- and long-term effects of child and parent behavior (Barkley et al., 1991; Rothbaum & Weisz, 1994). Specifically, there may be short-term child effects, involving parents' immediate reactions to a child's externalizing behavior, or more long-term effects, reflecting the "wear and tear" of interaction with an externalizing child over time (Rothbaum & Weisz, p. 66). An 8-year follow-up study found that non-compliant children continued to be more difficult with their parents in adolescence, and parents continued to display more negative parental behavior and remain less rewarding (Barkley et al.).

Implications for Intervention

Whether the negative parent-child interaction in families of ADHD children is viewed as a linear process or a bi-directional, interactive process, it may affect the child's future development in terms of self-concept and social competence. Adjustment problems such as those may further exacerbate the child's symptomatology (Barkley, 1985; Befera & Barkley, 1985; Hechtman, 1996). Because of the prevalence of ADHD, together with the risk for the development of more serious behavioral problems and problems in parent-child interactions, there has been a great deal of research into the effectiveness of various interventions. The most widely used empirically-validated treatment for ADHD children

is psychostimulant medication, though it is not a panacea for ADHD. Approximately 50% to 70% of treated children experience a significant improvement in symptoms of impulsivity, inattention, and overactivity (Greenhill, 1998). However, not all children with ADHD significantly benefit from stimulants. Also, results of a long-term follow-up study investigating the effects of stimulant medication indicated minimal improvements beyond those obtained at the onset of treatment (Hechtman, Weiss, & Perlman, 1984). Stimulant medications can also produce undesirable side effects in children with ADHD, such as insomnia, reduced appetite, stomachache, headache, and dizziness (Greenhill). Less frequent side effects include nausea, irritability, weight loss, growth suppression, tics, and a flattening of affect. The classification of psychostimulants by the Drug Enforcement Administration as agents of high abuse potential is another concern among parents and professionals (Greenhill).

Due to potential side effects and concerns about the use of stimulant medications, many parents feel ambivalent about medicating their child (Widener, 1998). In studies of parents' acceptability of ADHD interventions, parents of children with ADHD were more willing to pursue counseling than medication, to treat oppositional, disruptive, and aggressive behaviors (Bennett, Power, Rostain, & Carr, 1996; Wilson & Jennings, 1996). Due to parents' negative attitude toward medication, children often are not given medication when they are out of school during evenings, weekends, or vacations (Driskill, 1999). Since parents are more likely to be dealing with their children in an unmedicated state, medication may have less impact on changing the parent-child interactions than would other types of treatment (Anastopoulos et al., 1998; Barkley,

1987; Driskill). Therefore, interventions that involve parents are needed to produce significant improvement for these children and their families.

Parent Training Interventions

Parent training as a treatment for children with ADHD has grown in popularity in the past several years, which can be observed not only by the vast amount of research in this area, but also by the explosion of “how-to” books and parenting programs designed to help parents with difficult children (Driskill, 1999; Frazier & Merrell, 1997). Most parent training programs propose that typical parenting approaches are not as effective for children with ADHD as they are for other children (Anastopoulos et al., 1998; Johnson, Franklin, Hall, & Prieto, 2000). Odom (1996) suggested that parents’ lack of knowledge about their child’s deficits and their reliance on usual parenting techniques may result in inappropriate parent-child interactions. Consequently, parent training programs seek to improve parents’ abilities to cope with and manage the problems associated with childhood ADHD by providing information about ADHD, enhancing parenting skills, and supporting parents’ sense of competence (Anastopoulos et al.; Barkley, 1987; McCleary & Ridley, 1999). Some of the most commonly researched parent training models include behavioral management, psychoeducation, and social skills training (Driskill; Dulcan & Benson, 1997).

Behavioral management interventions typically involve training parents to implement a system of reward and response cost procedures with their children at home (e.g., Anastopoulos et al., 1998; Barkley, 1987; Pelham & Waschbusch, 1999). The goal is to help ADHD children manage their own behavior by increasing the child’s awareness

of the connection between his or her behavior and the consequences that follow (Anastopoulos et al., 1998). Behavioral parent training methods have positively impacted the symptoms of ADHD, whether used alone, or in combination with psychopharmacological interventions (Anastopoulos, Shelton, DuPaul, & Guevremont, 1993; Estrada & Pinsof, 1995; Frazier & Merrell, 1997). Other demonstrated benefits of behavioral parent training programs are decreased parental stress, improved parenting behavior and self-esteem, and reduced oppositional behavior by the children (Anastopoulos et al.; Danforth, 1998, 1999; Pisterman et al., 1992). Long-term gains in child and parent functioning following behavioral management training have been reported at 2- and 6-month follow-up (Anastopoulos et al., Danforth, 1998).

In addition to behavioral management, psychoeducational parent training methods reduce parental stress levels and increase parental knowledge about ADHD, satisfaction, and sense of competence (McCleary & Ridley, 1999; Odom, 1996; Weinberg, 1999). Also, decreases in the frequency and intensity of parent-adolescent conflict have been reported following an education group for parents of adolescents with ADHD (McCleary & Ridley). Similarly, following parent and child social skills training, improvements were found in child behavior problems and self-esteem and in parent stress and self-control, compared to the no-treatment control group (Driskill, 1999; Frankel, Myatt, Cantwell, & Feinberg, 1997; Sheridan, Dee, Morgan, McCormick, & Walker, 1996).

Although behavioral management, psychoeducation, and social skills parent training programs have facilitated parent and child improvements, these interventions focus on the child's symptoms and often ignore the importance of the parent-child

interaction. In treating children with ADHD, it is important to consider symptomatic behaviors in the context of their function, rather than to simply look at the isolated, overt behaviors (Erdman, 1998). In addition to child symptomatic behaviors, numerous studies have reported decreased family functioning, increased parenting stress, and negative parent-child relationships in families of children with ADHD, indicating the importance of treating the child's symptoms in relation to familial and parental problems (Barkley et al., 1992; Buhrmester et al., 1992; Campbell et al., 1991). Behavioral strategies, such as reward systems and token economies, which focus on symptomatic treatment of the child alone may provide a "Band-Aid Effect" on the child's symptoms, rather than addressing the underlying parent-child relationship issues and alleviating the function of disruptive behaviors (Erdman; Stiefel, 1997). Behavioral strategies also focus on the child's problem behaviors, often neglecting an emphasis on building the child's self-esteem. In addition, interventions that focus therapeutic attention solely on the child's behavioral symptoms may find that the parents continue to experience parenting stress, since parent factors are also related to parent-child interactional stress (Anastopoulos et al., 1992; Gardner et al., 1999; Gomez & Sanson, 1994). Thus, interventions that shift the focus from the child to the parent-child interaction are necessary.

Empathy and Parent Training

Not only do behavioral parent training interventions lack emphasis on parent-child interactions, but they also fail to address the importance of parental empathy in these interactions. Research shows that maternal deficits in responsiveness, involvement, and warmth may be a causal factor in the development and maintenance of child behavior

problems (East, 1991; Pettit & Bates, 1989; Stormshak et al., 2000). According to Ladnier and Massanari (2000), the most powerful tool available to parents for breaking the cycle of child behavior problems is their expression of empathy for the child. Similarly, Stiefel (1997) proposed that interventions which increase the caregivers' warmth, attunement, perspective-taking, and positive emotional involvement would likely benefit the parent and child by improving parent-child interactions.

Although most parent training programs emphasize the importance of spending quality time with children, few programs directly address the relationship between the parent and child by having parents and children interact with one another during play sessions (Johnson et al., 2000). In a study of parent-child interactions with conduct-problem children, Gardner (1987) found that conduct-problem children tend to spend more time engaging in conflict with their mother than nonproblem children, and conduct-problem children spent less time in joint activities such as play and conversation with their mothers. According to Gardner, aversive interactions between parent and child provide training for conflict, whereas joint play and conversation provides opportunities for harmonious interactions. During more positive activities, parents and children learn different interacting skills, such as to be mutually reinforcing, to enjoy each other's company, and to be cooperative and sensitive to each other's wishes and interests.

One type of parent training that seeks to enhance the parent-child relationship through increasing positive interactions is filial therapy. The name "filial" literally means "pertaining to a son or daughter," and filial therapy differs from other models of parent training which focus on teaching behavioral techniques or problem solving to change the

child's behavior (Guerney, 1983). In contrast, the objective of filial therapy is to change the *parent's* behavior by teaching the parent to respond to the child with empathy and unconditional acceptance (Landreth, 1991). Techniques such as describing what a child is doing, active listening, and reflecting feelings are taught to parents. Then, parents practice these new skills during special playtimes with their children at home. As the parent consistently attempts to understand the child's feelings, reactions, expressions, and point of view, the child develops a new perception of the parent as an ally (Landreth).

Although filial therapy has not been empirically investigated with ADHD children without comorbid diagnoses, improvements have been reported for children's emotional and behavioral adjustment, as a result of the filial therapy experience (Guerney, 2000; Landreth, 1991). Quantitative and qualitative studies have supported the use of filial therapy with children who have experienced a wide range of difficulties, including emotional disturbance (Guerney, 1976), behavioral problems (Athanasίου & Gunning, 1999), development disorders (Beckloff, 1997), learning difficulties (Kale, 1997), mental retardation (Boll, 1972), stuttering problems (Kraft & Landreth, 1998), chronic illness (Glazer-Waldman, Zimmerman, Landreth, & Norton, 1992; Tew, 1997), and sexual abuse (Costas & Landreth, 1999). In addition to improvements in the child, investigations of filial therapy have demonstrated effectiveness in altering mothers' verbal responses to their children toward increased empathy and understanding (Rennie & Landreth, 2000). Following filial therapy, parents have reported increases in unconditional love for their child, appreciation for their child's uniqueness, acceptance of their child's feelings, and

recognition of their child's need for autonomy and independence. In addition, parents have reported lower levels of parenting-related stress after filial therapy training.

Like filial therapy, Parent-Child Interaction Therapy (PCIT) attempts to improve parent-child relationships through teaching parents some fundamental relationship-building techniques employed by play therapists (Eyberg & Boggs, 1998). Although the research is limited, studies have demonstrated the effectiveness of PCIT with ADHD children. Immediately following PCIT treatment, mothers have reported significant improvements in their children's behavior and a reduction in ADHD symptom severity (Nixon, 2001). In addition, these treatment gains were maintained at 6-month follow-up. Similarly, Johnson et al. (2000) found that following PCIT, parents of a boy with ADHD endorsed feeling competent regarding their ability to parent, and both the child and his parents reported stronger positive feelings toward one another. Another study that utilized a similar type of training found that after 10 sessions of individual play therapy and parent training in play therapy techniques, a nine-year-old girl with ADHD demonstrated improvement in behavioral problems, and her mother reported feeling more competent as a parent (Kaduson, 2000). Each of these studies provided support for interventions that focus on improving parental empathy in parent-child interactions, however, they are limited by small samples and self-report measures.

Summary of Literature

Prominent contributors to the field of psychology have suggested that empathy is one of the most crucial factors in fostering healthy child psychological development (Kohut, 1977; Landreth, 1991; Rogers, 1939; 1951). Parental empathy may be even more

critical for children with ADHD, due to the number of difficulties they experience related to this disorder (Stormshak et al., 2000). Children with ADHD not only have problems related to inattention and hyperactivity-impulsivity, but they also frequently experience low self-esteem, conduct and learning problems, poor peer and family relations, and the absence of social skills (APA, 1994; Barkley, 1997; Barkley et al., 1991; DuPaul et al., 2001; Kottman et al., 1995). For parents of these children, providing empathy may be a tremendous challenge, due to the significant stress their families often experience. In addition to using more punitive child rearing approaches, characterized by more control, insults, and direction, parents of ADHD children also tend to express less empathy, warmth, and support than do parents of non-ADHD children (Barkley et al., 1991; Campbell et al., 1991; Gomez & Sanson, 1994; Pettit & Bates, 1989; Stormshak et al., 2000). Furthermore, parents of hyperactive children spend less time with their children than do parents of control group youngsters (Gardner, 1987).

ADHD is one of the most common reasons for referrals of children to mental health services, creating a considerable demand for effective treatment strategies (APA, 1994). Even though psychostimulant medication is the most widely used treatment for children with ADHD, its limitations present the need for alternative interventions, separately or in combination with medication (Hechtman et al., 1984; Widener, 1998; Wilson & Jennings, 1996). Research has been directed at understanding how child behavior problems can be altered through parent training, however, these studies tend to have a one-sided focus. Although research provides support for behavior management, psychoeducation, and social skills training, these approaches focus on changing the

child's behavior, rather than viewing this behavior within the context of the parent-child relationship (Erdman, 1998; Stiefel, 1997). Theorists suggest that a healthy parent-child relationship is of primary importance and that low levels of parental empathy, warmth, support, and time may be associated with poorer child adjustment, whether or not the child has ADHD (Kohut, 1987; Landreth, 1991; Rogers, 1939). Furthermore, interventions that emphasize enhancement of parental empathy have found improvements in parents' responses to their children and in children's emotional and behavioral functioning, indicating the significance of parental empathy in child adjustment.

Statement of the Problem

Much attention has been paid in research and therapy to negative cycles of interaction between parent and child, which are thought to play a crucial role in the development and maintenance of child behavior problems. However, it is equally important to consider how positive family interactions can be promoted, as these are likely to help prevent or reduce behavior problems. Due to the absence of literature on positive parent-child interactions with ADHD children, questions remain about which are the crucial parental behaviors, or combinations of behaviors, that may help prevent or reduce problem behavior and facilitate the best possible outcomes (e.g., high child self-esteem). Whereas behavioral strategies may be useful in limiting problematic behavior in ADHD children (Anastopoulos et al., 1993; Estrada & Pinsof, 1995; Frazier & Merrell, 1997), parental empathy may go beyond that goal by healing the parent-child relationship and fostering child personality development and self-esteem (Campbell, 1977; Kohut, 1977; Landreth, 1991; Rogers, 1939, 1951). Also, by receiving messages of empathy

from parents, ADHD children may learn how to respond empathically to others, which may facilitate the development of social skills and decrease peer rejection (Rogers, 1961). Furthermore, parental empathy may enhance behavioral parenting strategies by breaking the negative cycle of parent-child interaction and creating more understanding and responsiveness in relation to one another. For example, if the parent sets limits on the child's problem behavior in a more empathic manner, the child may be more likely to comply. Although behavior management strategies have been found to be successful in parenting ADHD children, the effect of parental empathy has not been systematically studied with ADHD children.

Hypotheses

Among parent-child dyads with ADHD children, it is hypothesized that parental empathy will significantly predict greater psychological, social, and behavioral child adjustment. Specific hypotheses are:

Hypothesis 1. Higher levels of parental empathy will predict higher levels of child self-esteem.

Hypothesis 2. Higher levels of parental empathy will predict higher levels of child peer acceptance.

Hypothesis 3. Higher levels of parental empathy will predict higher levels of child compliance.

Hypothesis 4. Higher levels of parental empathy will predict lower levels of child aggression.

Hypothesis 5. (See Figure 1)

- (a) There is a significant positive effect of parental empathy on child adjustment variables (self-esteem, peer acceptance, compliance, and aggression), regardless of whether or not the child has ADHD.
- (b) Children with ADHD will score significantly more maladjusted, compared to children without ADHD, on measures of self-esteem, peer acceptance, compliance, and aggression.

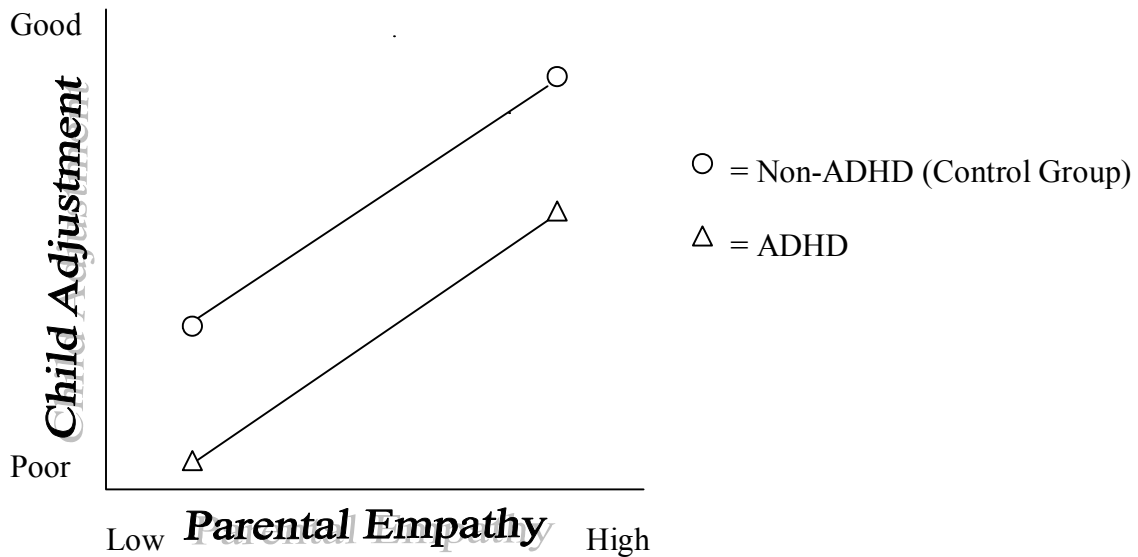


Figure 2. Hypothesized effects of parental empathy and ADHD status on child adjustment

CHAPTER 2

Method

Participants

Participants included 93 girls and boys and their parent/guardian, who were recruited from the community through advertisements. The children were between the ages of 7 years, 0 months, and 11 years old, 6 months. See Appendix A, Table 2 for a complete description of the child participants, including gender, ethnic background, age, and grade. Fifty-three of the child participants were previously diagnosed with Attention-Deficit/Hyperactivity Disorder, Combined Type (ADHD/C), two were diagnosed with Attention-Deficit/Hyperactivity Disorder, Primarily Inattentive Type (ADHD/I), and one was diagnosed with Attention-Deficit/Hyperactivity Disorder, Primarily Hyperactive/Impulsive Type (ADHD/HI). Children in the ADHD group had been diagnosed with ADHD by a physician (i.e., pediatrician, psychiatrist, neurologist, or ADHD specialist) or a psychologist. In addition, symptoms of ADHD were confirmed through the use of parent and teacher report measures. Fifty-one parent-child dyads served as a comparison group; however, fourteen children were eliminated due to high parent- and teacher-reported ADHD symptomology, leaving 37 dyads in the control group. Exclusion criteria for the study included the presence of child pervasive developmental disorders, mental retardation, or traumatic brain injuries (based on parent report). In addition to the participation of the parent-child dyads, parents were asked to

solicit the participation of their child's primary teacher. Fifty-seven teachers participated in the study by completing two measures described in the following section.

In the ADHD group, 20 child participants had a total of 32 psychiatric diagnoses in addition to ADHD, including oppositional defiant disorder, anxiety disorders, major depressive disorder, bipolar disorder, and learning disorders. Forty-three (77%) of the children in the ADHD group were taking stimulant medications, including Concerta, Adderall, Ritalin, Dexedrine, and an herbal stimulant. Two children in the Control group had psychiatric diagnoses, which were learning disorders. Children in the ADHD group were significantly more likely to have attended psychotherapy than those in the Control group ($p < .001$).

See Appendix A, Table 3 for a description of parent/guardian participants, including gender, ethnic background, age, marital status, highest grade completed, yearly household income, psychotherapy, and parenting class attendance. The majority of parent participants were married Caucasian mothers ages 33 to 41 years, with at least community college education and a yearly household income of at least \$50,000. There were no significant differences between parents in the ADHD and Control groups for any demographic variable. Twenty parents in the ADHD group self-reported a total of 32 psychiatric diagnoses, including ADHD, personality disorder, substance abuse/dependence, anxiety disorders, major depressive disorder, dysthymic disorder, and bipolar disorder. Six parents in the Control group reported a total of 9 psychiatric diagnoses, including ADHD, generalized anxiety disorder, major depressive disorder, and

bipolar disorder. There were no significant differences between the parents in each group for attending parenting classes.

Measures

Demographics questionnaire. The “Demographic Information and History Form” (see Appendix C) was completed by the child’s participating guardian. This questionnaire was designed for a larger research study and includes some information that was not used in the present study. Variables that were included in the present study are parent and child gender, age, education level, ethnicity, and estimated socioeconomic status. Other variables included the guardian’s marital status and history of parenting classes, and the child’s psychiatric diagnoses (i.e., ADHD), treatment history, and current medications.

Measures to confirm diagnoses of ADHD. Three measures were used to confirm diagnoses of ADHD: the ADHD Rating Scale-IV: Home Version (ADHD-RS-IV: HV), the ADHD Rating Scale-IV: School Version (ADHD-RS-IV: SV) (DuPaul, Power, Anastopoulos, & Reid, 1998) and the Child Behavior Checklist (CBCL/4-18; Achenbach, 1991). The ADHD Rating Scale-IV: HV was completed by the child’s participating guardian. The ADHD-RS-IV: HV consists of 18 items that were derived from the ADHD diagnostic criteria in the DSM-IV (APA, 1994). For each item, the frequency of the child’s behavior at home within the last 6 months is rated on a 4-point Likert scale (“0 = never or rarely,” “1 = sometimes,” “2 = often,” “3 = very often”). Subscales of the ADHD-RS-IV: HV include a 9-item Inattention subscale and a 9-item Hyperactivity-Impulsivity subscale (with scores ranging from 0 to 27). A Total Scale score (ranging from 0 to 54) was also obtained by summing the raw scores of the two subscales. Raw

scores from the Total Scale and the two subscales were then converted to percentiles. Norms for the scale were derived separately for boys and girls from an ethnically and regionally representative sample of 2000 children (ages 4 to 19) (DuPaul et al.).

The overall reliability and validity of the ADHD-RS-IV: HV is adequate. DuPaul et al. (1998) reported internal consistency coefficients for the three scales ranging from $\alpha = .86$ to $.92$. In the present study, internal consistency was $\alpha = .98$ for the entire sample (ADHD group and control group combined). In addition, DuPaul et al. found that four-week test-retest reliability statistics ranged from $r = .78$ to $.86$. DuPaul and his colleagues confirmed the validity of the ADHD-RS-IV: HV by comparing it to other measures used to assess ADHD symptoms. High correlations were found between the Hyperactivity-Impulsivity subscale of the ADHD-RS-IV: HV and the Conners Parenting Rating Scale – Revised (CPRS, Conners, 1989) Hyperactivity Index, the CPRS Impulsivity-Hyperactivity subscale, and the CPRS Conduct Problems subscale, ranging from $r = .65$ to $.81$. The Inattention subscale had a high correlation with the CPRS Learning Problems subscale ($r = .66$). As would be expected, lower correlations were found between the ADHD-RS-IV: HV and the CPRS subscales that are unrelated to ADHD (e.g., Psychosomatic, Anxious) (DuPaul et al.).

Parent ratings on the ADHD-RS-IV: HV discriminated between the different subtypes of ADHD in the DSM-IV (APA, 1994). In addition, parent ratings on the ADHD-RS-IV: HV distinguished between children with ADHD and clinic-referred children without ADHD. Specifically, parent ratings on the Hyperactivity-Impulsivity subscale were highest for children with ADHD Combined Type ($M = 16.4$; $SD = 5.9$)

compared to children with ADHD Predominantly Inattentive Type ($M = 10.7$; $SD = 5.7$) and children without ADHD ($M = 11.6$; $SD = 8.0$). Parent ratings on the Inattention subscale were highest for children who had ADHD, regardless of subtype ($M = 19.3$; $SD = 4.3$ for both ADHD groups) when compared to children without ADHD ($M = 14.2$; $SD = 7.9$) (DuPaul et al., 1998).

The ADHD Rating Scale-IV: SV (DuPaul et al., 1998) was completed by the child's primary teacher. The 18 items on the School Version are identical to the items on the Home Version and utilize the same 4-point Likert scale. In addition, the same scales (Inattention Subscale, Hyperactivity-Impulsivity Subscale, and the Total Score) were derived from the teachers' responses on this measure (DuPaul et al.).

The overall reliability and validity of the ADHD-RS-IV: SV is very good. DuPaul et al. (1998) reported internal consistency coefficients for the three scales ranging from $\alpha = .88$ to $.96$. In the present study, internal consistency was $\alpha = .94$ for the entire sample. In addition, DuPaul et al. found that four-week test-retest reliability statistics on the scales ranged from $r = .88$ to $.90$. To assess validity of the ADHD-RS-IV: SV, comparisons were made between this measure and other measures historically used to assess ADHD. Moderate and strong correlations were found between the Hyperactivity-Impulsivity subscale of the ADHD-RS-IV: SV and the Conners Teacher Rating Scale – Revised (CTRS, Conners, 1989) Hyperactivity Index, the CTRS Impulsivity-Hyperactivity subscale, and the CPRS Conduct Problems subscale, ranging from $r = .55$ to $.79$. The ADHD-RS-IV: HV Inattention subscale showed strong correlations with the CTRS Hyperactivity subscale ($r = .73$) and the CTRS Hyperactivity Index ($r = .76$). In

addition, as would be expected, the Inattention subscale had the highest correlation with the CTRS Daydream-Attention scale ($r = .85$) (DuPaul et al.).

Similar to parent ratings, teacher ratings on the ADHD-RS-IV: SV differentiated the different subtypes of ADHD in the DSM-IV (APA, 1994). In addition, teacher ratings on the ADHD-RS-IV: SV distinguished between children with ADHD and clinic-referred children without ADHD. Specifically, teacher ratings on the Inattention subscale were highest for children who have ADHD, regardless of subtype: $M = 21.6$ ($SD = 4.3$) for children with ADHD Combined Type and $M = 19.3$ ($SD = 4.7$) for children who have ADHD Predominantly Inattentive Type, compared to children without ADHD ($M = 13.3$; $SD = 5.9$). Teacher ratings on the Hyperactivity-Impulsivity subscale were highest for children with ADHD Combined Type ($M = 18.6$; $SD = 5.7$) compared to children with ADHD Predominantly Inattentive Type ($M = 6.9$; $SD = 4.5$) and children without ADHD ($M = 10.5$; $SD = 8.0$) (DuPaul et al., 1998).

The third measure used to assess symptoms of ADHD was Achenbach's Child Behavior Checklist (CBCL; Achenbach, 1991). Specifically, the Attention Problems Scale of the CBCL was utilized in this study. The CBCL is a behavior checklist completed by parents and consists of 118 items. Each item is rated on a 3-point scale (0 = "not true"; 1 = "somewhat or sometimes true"; 3 = "very true or often true"). This checklist yields nine "Problem Behavior Scales" and three "Competence Scales," which are derived from multivariate statistical procedures conducted and reported separately for boys and girls in different age groups (Achenbach). Results from the CBCL scales are reported in T scores ($M = 50$; $SD = 10$) to indicate how a child's scale scores compare to

the gender specific normative sample. T-scores in the range of 60-69 are considered to be at-risk scores, while scores above 70 (above the 98th percentile) are in the clinically significant range. The “Problem Behavior Scales” on the CBCL include: Attention Problems, Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Delinquent Behavior, Aggressive Behavior, and Sex Problems. The Competence Scales include: Activities, Social, and School. Factor analytic procedures were used to derive an Internalizing Scale (composed of Withdrawn, Somatic Complaints, and Anxious/Depressed) and an Externalizing Scale (composed of Delinquent Behavior and Aggressive Behavior).

Research with the CBCL has demonstrated the CBCL has sound psychometric properties. Specifically, Achenbach (1991) found the test-retest reliability of the Problem subscales on the CBCL to be good ($r = .89$) over a seven-day period. Inter-parent reliabilities for the Problem scales were also found to be adequate ($r = .65$ to $.75$). The construct validity of the CBCL was assessed by comparing scores on the CBCL scales to the Conners Parent Questionnaire (CPQ, Conners, 1973) and the Quay-Peterson Revised Behavior Problem Checklist (RBPC, Quay & Peterson, 1983); analogous scales were correlated. Regarding the Attention Problems scale, moderately high correlations were found between the Attention Problems Scale and the Impulsivity/Hyperactivity and the Attention Problems scales of the CPQ and the Motor Excess Scale of the Quay-Peterson RBPC, with correlations ranging from $r = .59$ to $.77$ (Achenbach).

The Attention Problems Scale of the CBCL has shown good convergent validity with an ADHD diagnosis resulting from a structured interview (Biederman, Faraone,

Doyle, et al., 1993). Specifically, Biederman and colleagues administered the Schedule for Affects Disorders and Schizophrenia for School Age Children - Epidemiologic Version (Kiddie SADS-E) to parents of children with and without ADHD and DSM-III-R diagnoses were determined. “Excellent convergence” (p. 1247) was found between ADHD diagnoses derived from a structured interview and the Attention Problems Scale on the CBCL, using both total predictive power and odds ratios. Specifically, elevations on the Attention Problems Scale correctly diagnosed children with ADHD 86% of the time (Biederman, Faraone, Doyle, et al.). Similarly, Biederman, Faraone, Mick and colleagues (1996) found the Attention Problems scale of the CBCL differentiated children with ADHD from those without that diagnosis. In the present study, the internal consistency for the CBCL Attention Problems Scale was $\alpha = .89$ for the entire sample. In summary, the CBCL demonstrates sound psychometric properties, making it a useful tool that is widely used in clinical, community, and research settings.

For the present study, diagnoses of ADHD/HI and ADHD/C were confirmed with elevations above the 75th percentile on the Hyperactivity-Impulsivity subscale or the Total Score of the ADHD-RS-IV: HV or the ADHD-RS-IV: SV or a score above the 85th percentile on the Attention Problems scale of the CBCL. Diagnosis of ADHD/I was confirmed with elevations above the 75th percentile on the Inattention subscale or the Total Score of the ADHD-RS-IV: HV or the ADHD-RS-IV: SV or a score above the 85th percentile on the Attention Problems scale of the CBCL. Further, “non-ADHD” children were eliminated from the control group if they received elevations above the 90th

percentile on any of the three scales of the ADHD-RS-IV: HV or the ADHD-RS-IV: SV or a score above the 85th percentile on the Attention Problems scale CBCL.

Measures of parent relational skills. Three measures were used to assess parental empathy and acceptance: the Child-Parental Acceptance Rejection Questionnaire/Control (Child-PARQ/Control; Rohner, 1999), the Adult-Adolescent Parenting Inventory-2 (AAPI-2; Bavolek & Keene, 1999), and the Parent-Child Interaction Assessment (PCIA; Holigrocki, Kaminski, & Frieswyk, 1999). The Child-Parental Acceptance Rejection Questionnaire/Control (Child-PARQ/Control) is a 73-item measure designed to assess the child's perception of the parent's behavior toward his/her child in terms of the constructs acceptance and rejection, as well as parental control (Rohner, 1999). Parental acceptance-rejection is viewed as a bipolar dimension of parent behavior with parental acceptance at one end and parental rejection at the other end. Rohner defines "acceptance" as warmth, affection, and support that can be expressed by parents either physically or verbally. Parental acceptance can be expressed physically through hugging, caressing, smiling, or through other physical indications while verbal expression of parental acceptance includes praise and compliments. In contrast, Rohner defines parental "rejection" as the absence or withdrawal of acceptance, which can take three forms: aggression/hostility, neglect, and indifference. Finally, the parental "control" construct refers to the degree to which parents limit or restrict a child's behavior, as well as how much the parent uses directives and demands. Parental control is viewed as being a bipolar dimension with permissiveness at one end and strictness at the other end.

For the present study, an adapted version of the Child-PARQ/Control was created in order to make it easier for younger children to understand. Although the Child-PARQ was originally validated with children ages 9 to 12, Rohner (1999) states that it can be used with children as young as age 7. However, the abstract presentation of the items (i.e., "My mother...") and the more advanced vocabulary on the Child-PARQ/Control are likely to make it difficult for 7 and 8 year old children to understand.

Several steps were taken to develop an adapted version for the present study. First, the items on the Child-PARQ/Control were transformed from statements to questions. For example, the statement "My mother says nice things about me" was transformed into "Does your mother say nice things about you?" Second, the 4-point Likert scale responses on the Child-PARQ/Control were transformed into "4 = Yes, almost always," "3 = Yes, sometimes," "2 = No, sometimes," and "1 = No, almost always". This response format has been used with other adapted measures (e.g., the Adapted Self-Description Questionnaire I; Marsh, Craven, & Debus, 1991) and has proven to be reliable with younger children.

Standard rewording of the questions on the Child-PARQ/Control was developed through consultation with seven 1st and 2nd grade teachers. Teachers were given instructions to review the items on the Child-PARQ/Control and then asked to make suggestions for changing any difficulty vocabulary without changing the original meaning of the sentence. Once the teacher responses were collected, each teacher was assigned a code number so any patterns in the recommended rewordings could be examined. Across all the teachers, 50 of the 73 items contained vocabulary that may be

too difficult for 1st or 2nd graders to understand. For 7 of these items, Rohner (1999) had already developed alternate wordings. Standard rewordings were developed for the remaining items by incorporating the teachers' suggestions and using an age-appropriate dictionary.

Five subscales are derived from the Child-PARQ/Control: Warmth/Affection, Aggression/Hostility, Neglect/Indifference, Rejection (Undifferentiated), and Control (Rohner, 1999). A total rejection score is calculated by summing the item scores on four subscales (i.e., Warmth/Affection scale, the Aggression/Hostility scale, the Neglect/Indifference scale, and the Rejection (Undifferentiated) scale, with higher scores representing greater parental rejection. A "Control" score is derived by summing the item scores on the Control Scale, with higher scores representing greater parental control.

The sample used to assess validity and reliability of the original Child-PARQ was collected from 220 boys and girls ages 9 to 12 in Washington, D.C. elementary schools (Rohner, 1999). No significant differences were found for age, sex, social class, or ethnicity. Rohner reported that the Child-PARQ has adequate reliability, with internal consistency reliabilities of the scales ranging from $\alpha = .72$ to $.90$ ($p < .001$). Schenberg (1998) also found adequate internal consistency on the Child-PARQ ($\alpha = .85$) using a sample of 113 children, ages 7-12, and their mothers. In addition, for the individual scales, good internal consistency estimates were found for the Warmth/Affection scale (standardized item $\alpha = .87$), the Hostility/Aggression scale (standardized item $\alpha = .88$), and the Undifferentiated Rejection scale (standardized item $\alpha = .79$). However, the Indifference/Neglect Scale was less than reliable with standardized item alpha coefficient

of .16 (Schenberg). In contrast, another study conducted with children ages 8-18 ($M = 11.97$ years, $SD = 2.9$ years) found coefficient alphas ranging from .83 to .95 on the 4 scales of the Child-PARQ (Father version), with an overall α of .77 (Veneziano & Rohner, 1998). Finally, internal consistency reliability of the Control Scale on the Child-PARQ/Control ranged from $\alpha = .66$ to .81 in children ages 7 to 18 (Rohner, 1999). In the present study internal consistency for the Total Rejection Scale of the Adapted Child-PARQ was $\alpha = .82$ for the entire sample.

Concurrent validity was assessed by comparing the four scales of the Child-PARQ to three scales on Shaefer's Child's Report of Parent Behavior Inventory (CRPBI; Shaefer, 1964, as cited in Rohner, 1999) and one scale of Bronfenbrenner's Parent Behavior Questionnaire (BPB) (Siegelman, 1965, as cited in Rohner, 1999). The Warmth/Affection scale was found to have a high correlation with the Acceptance scale of the CRPBI ($r = .83$). The Aggression/Hostility scale was found to have a moderate correlation with the Physical Punishment scale of the BPB ($r = .55$). The Neglect/Indifference scale had a moderate correlation with the Hostile Detachment scale of the CRPBI ($r = .64$). Finally, the Rejection (Undifferentiated Scale) had a high correlation with the Rejection scale on the CRPBI ($r = .74$). It is important to note all correlations were significant at the $p < .001$ level (Rohner).

The Adult-Adolescent Parenting Inventory-2 (AAPI-2; Bavolek & Keene, 1999) is a 40-item self-report measure of parenting and child rearing attitudes of adolescents and adults (ages 13 and older). Parents rate each of the 40 statements on a 5-point Likert scale ranging from Strongly Agree, Agree, Uncertain, Disagree to Strongly Disagree. The

AAPI-2 has a fifth grade reading level, and the average time to complete the inventory is 12 to 17 minutes.

Responses to the items generate five sub-scores that provide an index of risk in five parenting behaviors: Inappropriate Expectations of Children, Lack of Empathic Awareness of Children's Needs, Strong Belief in the Use and Value of Corporal Punishment, Reversing Parent-Child Family Roles, and Oppressing Children's Power and Independence. Raw scores on each subscale are converted to sten scores, which range from 1 to 10. Low sten scores (1 to 4) indicate agreement in these parenting behaviors and high risk for practicing known abusive practices, whereas high sten scores (7 to 10) reflect a nurturing, non-abusive parenting philosophy. Mid-range scores (4 to 7) represent the parenting attitudes of the general population. The sten scores represent a normal distribution, as each score correlates with a percentage of people in the general population who would receive that particular score, adding to 100 percent. Adult and adolescent parents, both abusive and non-abusive, from 53 different agencies in 23 different states contributed to the normative data. Specifically, norms include 713 adult parents to represent the "normal or non-abusive" parent population, 198 adolescent non-parents to represent the "normal teenager," and 87 adolescent mothers to represent the "adolescent parent." Separate norms were generated for male and female adult and adolescent parents who have not received formal parent training.

Bavolek and Keene (1999) define empathy as "the ability of being aware of another person's needs, feelings, and state of being. It is the ability to place the needs of another as priority" (p. 6). Although the Empathic Awareness subscale measures parents'

recognition of the child's feelings, the Inappropriate Parental Expectations subscale measures their awareness of the child's developmental needs. Due to this study's focus on specific areas of developmental adjustment, the Inappropriate Expectations subscale was selected to assess self-reported parental empathy. According to Bavolek and Keene, inappropriate demands are placed on children due to a lack of empathy that is required to determine appropriate expectations at different stages in development. An example item on the Inappropriate Expectations subscale is "Good children always obey their parents." Parents who strongly agree with such statements would score low on the Inappropriate Expectations subscale, indicating a low level of parental empathy. Specifically, parents with a sten score of 1 to 3 lack empathic awareness and understanding of children's developmental capabilities and needs. These parents expect children to achieve at a higher level than they are capable. In contrast, parents with a sten score of 8 to 10 reflect a high level of parental empathy and a realistic understanding of the developmental capabilities of children, as well as the general acceptance of developmental limitations. High scoring parents tend to encourage self-growth and environmental exploration in children.

The AAPI-2 parenting constructs represent a summary of theory, research, and practice in describing abusive and neglecting parenting practices. Research with the AAPI-2 has found abusive parents express significantly more dysfunctional parenting attitudes than non-abusive parents in all five AAPI-2 constructs (Bavolek & Keene, 1999). Content validity was demonstrated through item and factor analysis of data reviewed by professionals in various helping fields. In addition, adequate internal

consistency has been reported for all subscales of the AAPI-2 (alphas $> .80$). Internal consistency for the AAPI-2 Inappropriate Expectations subscale was $\alpha = .67$ for the entire sample in the present study.

The Parent-Child Interaction Assessment (PCIA; Holigrocki, Kaminski, & Frieswyk, 1999) was also used to assess parent relational skills and empathy. The PCIA is an analogue observation technique designed to evaluate aspects of parent-child relational functioning. On the PCIA, a parent-child dyad is videotaped while they are given instructions about going on an imaginary trip to the zoo. A brief (90 seconds) “free play” interaction is followed by a series of instructions on playing out several scenes with toy people, animals, and blocks. These 15 “Co-construction Tasks” are designed to pull for emotions, as well as a variety of parenting behaviors, (e.g., level of involvement, nurturing, limit setting, and encouragement) (Holigrocki et al.). In addition, the scenarios put the children in situations “that may require them to delay gratification, achieve, take risks, negotiate autonomy, receive help, compete, and be comforted” (Holigrocki et al., p. 417). After the parent and child have completed the construction tasks, they engage in a “Clear-up task.” Finally, during the “Inquiry,” the parent and child view the videotape of parts of their interaction are asked about the actions, feelings, thoughts, and desires of themselves and the other person. For a detailed description of the PCIA, see Holigrocki, Kaminski, and Frieswyk (1999) and Holigrocki, Frieswyk, Kaminski, and Hough (1999).

Parent-child interactions during the PCIA were analyzed using the Observational Coding System for Parent-Child Interactions (OCS; Kaminski et al., 2002). The PCIA videotapes were coded with the OCS by independent graduate and post-baccalaureate

student coders who were blind to participant group status. In the present study, codes used to measure parent relational skills were Parents' Positive Personal Comments about the Child (PPC) and Parents' Negative Personal Comments about the Child (NPC), which are clearly defined in the OCS manual. For the purposes of this study, the number of parents' NPC was subtracted from the number of parents' PPC to determine Positive Parent Responsiveness to the child. These specific constructs were chosen after a thorough review of the constructs and operational definitions used in parent-child observations in both ADHD (e.g., Begera & Barkley, 1985; Johnston, 1996; Lindahl, 1998; Winsler, 1998) and normal samples (e.g., Boyum & Parke, 1995; Isley, O'Neil, & Parke, 1996; MacDonald & Parke, 1984). For the present study, 10 specific scenarios (e.g., "Scary Tunnel," "Hurt Arm," "Waiting," "High Rock," "Lost Child," "Stranger," "Animal Names," "Gift Shop," "Leaving," and "Lost Toy") were coded on these constructs. The scenes were selected due to their applicability to the study of parental empathy in parent-child interactions, as each scenario requires the parent to help the child with a problem, resolve a conflict, or set a behavioral limit. This provided an opportunity to study the parent's ability to respond positively and empathize with the child and the child's ability to demonstrate compliance. Using 10 scenarios yielded 15 minutes of observable parent-child interaction behaviors, which is consistent with previous studies that have sampled 10 to 15 minutes of parent-child interactions in both ADHD (e.g., Johnston, 1996; Lindahl; Winsler) and normal populations (e.g., Carson & Parke, 1996; Putallaz, 1987).

A team of 11 graduate and 2 post-baccalaureate students in psychology programs at the University of North Texas completed the PCIA coding according to the following procedures. First, each trainee was assigned two specific codes from the OCS. Next, trainees coded two archival PCIA videotapes according to the OCS on their specific codes. While in training, trainees were required to justify their ratings for each code. Then, coding on the archival videotapes by the trainee was reviewed by the lead author of the OCS. Trainees met as a group to discuss errors and clarify questions regarding coding. Following the procedure outlined by Weiner (1991), inter-rater reliability was computed by dividing the number of times the coders agreed on that code by the total number of times that code was assigned. Coders attained at least 65% agreement for their codes to be considered reliable. Trainees with less than 65% reliability continued to code archival tapes until adequate reliability was achieved. Student coders were paired and randomly assigned videotapes to code. Each pair was responsible for independently coding 46 to 92 videotapes. Weekly meetings were held to review coding questions. The final percent agreement among coders for the PPC and NPC codes was 71% and 86%, respectively.

Measures of child adjustment. Five measures were used to examine child adjustment: an adapted Self-Description Questionnaire I (SDQ-I; Marsh, 1988; Marsh et al., 1991), an adapted Loneliness and Social Dissatisfaction Questionnaire (LSDQ; Asher, Hymel, & Renshaw, 1984; Cassidy & Asher, 1992), the Teacher Rating Scale (Harter, 1982), the Parent-Child Interaction Assessment (PCIA; Holigrocki, Kaminski, &

Frieswyk, 1999), and the Aggressive subscale of the Child Behavior Checklist (CBCL; Achenbach, 1991).

To assess the child's self-esteem, an adapted version of the Self-Description Questionnaire I (SDQ-I; Marsh, 1988) was used. The SDQ-I is a 76-item multidimensional self-report measure of children's self-concept, which has an advantage over other measures of children's self-concept in its adherence to a strong theoretical base and definition. Marsh defines self-concept as, "a person's perceptions regarding himself or herself; these perceptions are formed through experience with and interpretations of one's environment. They are especially influenced by evaluations by significant others, reinforcements, and attributions for one's own behavior" (p. 27). Items on SDQ-I were based on the Shavelson model of self-concept and were supported by factor analyses, providing evidence for content and construct validity.

The SDQ-I was originally intended for use in grades 4 through 6 (ages 8 through 12). However, Marsh, Craven, and Debus (1991, 1998) provided empirical support for the use of an adapted SDQ-I with children 5 to 8 years of age. In completing the standard SDQ-I, children are asked to respond to simple declarative sentences (e.g., "I'm good at mathematics," "I make friends easily") with one of five responses: False, Mostly False, Sometimes False/Sometimes True, Mostly True, or True. In addition to 64 positively worded items, the standard SDQ-I includes 12 negatively worded items to avoid positive response bias. Because previous research has shown that children have trouble responding appropriately to negatively worded items, these items are not included in the scores derived from the SDQ-I (Marsh, 1988). For the adapted SDQ-I, the negatively

worded items are excluded altogether (Marsh et al., 1991). Also, the adapted SDQ-I involves an altered response scale. Rather than responding “True” or “False,” the interviewer initially asks the child to respond “Yes” or “No” to the sentence to indicate whether the sentence is true or false as a description of the child. If the child initially responds “Yes,” the interviewer then asks the child whether he or she means “Yes, always” or “Yes, sometimes.” If the child initially responds “No,” the interviewer then asks the child whether he or she means “No, always” or “No, sometimes.” If the child indicates that he or she understands sentence but cannot decide whether to respond “Yes” or “No,” the interviewer scores that response “3,” which is midway between the responses of “No, sometimes” (Score = 2) and “Yes, sometimes” (Score = 4; Marsh et al.). For a detailed description of the administration procedures for the altered SDQ-I, see Marsh et al. (1991, 1998).

The SDQ-I assesses three areas of academic self-concept (Reading, Mathematics, and General School self-concept scales) and four areas of nonacademic self-concept (Physical Ability, Physical Appearance, Peer Relations, and Parent Relations self-concept scales). Also, a General-Self self-concept scale “infers a general or overall positive self-perspective that is not specific to any particular facet of self-concept but could be applied to each specific facet of the self” (p. 23). In the present study, this scale was used for primary analyses as a measure of overall child self-concept. The Parent Relations scale was also used to investigate child self-concept regarding their relationship with their parents. The SDQ-I raw scores may be converted to percentile ranks and standard scores, with a mean of 50 and a standard deviation of 10. Normative comparisons are reported

separately for males and females in grades 2 through 4, and combined norms based on responses by both males and females in grades 2 through 6 are used for making group comparisons.

In a study to evaluate the use of the adapted SDQ-I with young children, 501 students in kindergarten, first grade, and second grade completed the questionnaire (Marsh et al., 1991). In addition to the altered response format, procedures for standard SDQ-I administration were adjusted so that the adapted SDQ-I was administered as an individual interview, whereby the examiner read each item aloud. Marsh et al. found that each of the eight SDQ-I factors that have been identified in responses by older children (ages 8 to 12) was identified for younger children (ages 5 to 8), though the average correlation among the SDQ-I factors was smaller with increasing age. The adapted SDQ-I possessed good internal consistency, with alpha estimates ranging from .72 to .86, except for the Parent Relationships and Physical Ability scales, with alpha estimates of .69 and .51 respectively, for kindergarten respondents only. In general, these reliability estimates increased with age (Marsh et al.). High levels of internal consistency among the eight scales have also been reported for young Mexican-American children (.81 to .96; Shafer, Kaminski, Neumann, & Ramos, 2002). In the present study, internal consistencies for the entire sample were $\alpha = .69$ for the General Self scale and $\alpha = .74$ for the Parent Relations scale. Marsh et al. also reported correlations among the adapted SDQ-I scores for children in kindergarten through second grade compared with those in the normative archive of SDQ-I scores for students in grades 2 through 6. Results suggested that the adaptive SDQ-I procedures may facilitate the differentiation of self-concept facets by

five- to eight-year-old children. Although the adapted SDQ-I contains more items than most measures developed for younger children, there was no deterioration in responses near the end of the questionnaire. Overall, Marsh et al. suggested that the psychometric properties of the adapted SDQ-I provide reasonable support for assessing self-concept in children ages 5 to 8.

The adapted Loneliness and Social Dissatisfaction Questionnaire (LSDQ; Asher, Hymel, & Renshaw, 1984; Cassidy & Asher, 1992) was used as a measure of the child's peer acceptance. The LSDQ is a 24-item measure completed by a child to assess perceived peer acceptance and feelings of loneliness. Sixteen of the items focus on children's feeling of loneliness, while 8 items focus on children's hobbies or preferred activities and act as distracters. The original LSDQ designed by Asher and colleagues was transformed by Cassidy and Asher from a statement-response format to a question-response format. In the adapted version, the child is asked to respond to the questions with "3 = yes," "2 = sometimes" or "1 = no." Scores on the LSDQ range from 16 to 45, with higher scores representing higher peer acceptance. This adapted version has good reliability with internal consistency reported at $\alpha = .79$ (Cassidy & Asher). In the present study, internal consistency of the adapted LSDQ was $\alpha = .88$ for the entire sample. In addition, the 1984 version revealed a Guttman split-half reliability of .91 (Asher et al.). Asher and colleagues report that scores on the LSDQ have been found to be significantly associated with peer ratings and child-reported number of friends.

In addition to the LSDQ, the Teacher Rating Scale (Harter, 1982) was used as a measure of children's peer acceptance. The Teacher Rating Scale is a 36-item measure

designed to parallel the Self-Perception Profile for Children (Harter, 1985). There are five domains on this measure: (1) scholastic competence (academic performance); (2) social acceptance; (3) athletic competence (sports and outdoor games); (4) physical appearance and behavioral conduct; and (5) global self-worth. Responses are given in a double “structured alternative format.” For example, the teacher is first asked to decide between two statements as to which fits the child best (e.g., “This kid often forgets what he or she learns, but this kid remembers things easily.”) Once the teacher makes a “statement” choice, the teacher then rates the statement as “Sort of True for this Child” or “Really True for this Child.” The scale showed excellent internal consistency reliability, reported at $\alpha = .93$ to $.96$ (Harter, 1982). Similarly, the present study found internal consistency at $\alpha = .94$ for the entire sample. Good factorial validity was also demonstrated with item loadings on each factor ranging from $.60$ to $.67$ (i.e., scholastic, social acceptance, physical appearance, and global self-worth). The social acceptance domain is the domain of interest for the present study.

Child compliance and aggression in parent-child interactions were assessed with the PCIA (Holigrocki, Kaminski, et al., 1999) and coded with the OCS (Kaminski, et al., 2002; see “Measures of parent relational skills” for description of PCIA and coding procedures). Parents’ commands to their child were transcribed on two PCIA scenarios, “Waiting” and “High Rock.” Using the transcripts and the PCIA videotapes, child compliance to these commands was coded using 7 OCS codes: Yes (YES), No (NO), Inconsistent (INC), Avoidant (AVD), Ignore (IGN), No Time to Comply (NTC), and Uncodeable (UNC). For the present study, child compliance scores were computed by

dividing the total number of parental commands by the number of times the child complied (number of YES codes). The percent agreement among coders for child compliance codes was 66%.

Child aggression was coded using the OCS Child Physical Aggression (AGG) code, which indicates “any action (i.e., behavior) by the child that is destructive or hurtful OR would be perceived as destructive or hurtful if the child’s play were real” (Kaminski et al., 2002). The specific target of child physical aggression (e.g., self or others) was coded for 7 PCIA scenarios: “Scary Tunnel,” “Waiting,” “High Rock,” “Lost Child,” “Stranger,” “Gift Shop,” and “Leaving the Zoo.” During each of these scenes, coders indicated the presence or absence of child aggressive behavior every 30 seconds, totaling 21 possible occurrences. Coders were careful not to include “rough play” or unintentional harm, as described in the OCS manual. For statistical analysis, the frequency of the child’s AGG codes was used. The percent agreement among AGG coders was 94%.

In addition to the PCIA coding of child aggressive behavior, the Aggressive Behavior subscale of the Child Behavior Checklist (CBCL; Achenbach, 1991) was used as a measure of the child’s aggression toward others. The CBCL Aggressive Behavior subscale includes behaviors such as arguing, teasing, fighting, and destroying property. See “Measures to confirm diagnoses of ADHD” for a general description of the CBCL and its psychometric properties. As previously noted, the construct validity of the CBCL was assessed by comparing scores on the CBCL scales to analogous scales on the Conners Parent Questionnaire (CPQ) and the Quay-Peterson Revised Behavior Problem Checklist (RBPC). Moderately high correlations were found between the Aggressive

Behavior scale and the Conduct Problem scales of the CPQ and the Quay-Peterson RBPC, with correlations ranging from .86 to .88 (Achenbach). In addition, test-retest reliability after one week ($r = .91$) and long-term stability after one to two years ($r = .84$ to $.87$) were good for the Aggressive Behavior scale scores of boys and girls. Good interparent agreement also has been demonstrated for the Aggressive Behavior scale scores, with a mean correlation of $r = .77$. In the present study, internal consistency for the CBCL Aggressive Behavior scale was $\alpha = .92$ for the entire sample.

Procedure

Parent-child dyad participants were recruited in several ways. Families with ADHD children were referred through ADHD support groups (e.g., CHADD, ADDA), family therapy clinics, school counselors, parent education groups and flyers posted in physician's offices, pharmacies, and throughout the community (see Appendix D). Participants who were interested in the study were contacted by phone by the researchers and told about the study and its procedures. Parents of ADHD children were made aware that participation required that their child delay or skip 1 dose of their stimulant medication (as is standard in observational studies of ADHD children). Parents were told that participation included a thirty minute videotaped play interaction with his or her child. Parents also spent approximately two hours completing questionnaires. Each child also spent about 45 minutes to an hour completing the 3 child-report questionnaires with the help of a trained graduate student. Then the child was allowed to play with the examiner for the remainder of the time. Parent-child dyads who wished to participate were scheduled for a 3-hour appointment.

Upon arrival at the testing site (University of North Texas Psychology Building – Terrill Hall, or Great Lakes Academy in Plano), participants were greeted and informed consent was obtained (see Appendix E). Assent was solicited and obtained from all child participants if their parent chose to sign the Informed Consent, as seen on the last page of the Informed Consent Form. After providing written informed consent, parents of ADHD children were discretely reminded by one researcher to allow the child to take their stimulant medication. The other researcher(s) who collected data from the child were blind to the child's ADHD status.

Once consent was obtained, parents and their son or daughter participated in the PCIA (Holigrocki, Kaminski, et al.1999). The PCIA was administered according to the protocol described in the PCIA Manual (Holigrocki, Frieswyk, Kaminski, & Hough, 1999). The PCIA was videotaped and all materials and toys were set up in a standardized manner. The testing room was free of distractions and the researcher remained in the room except during the “Free Play” and “Clear Up” scenarios. During each scenario, the researcher remained quiet unless spoken to directly. Whenever necessary, a non-directive and warm response was given (Holigrocki et al.).

Following the administration of the PCIA, parents were given one of 4 counterbalanced questionnaire packets (which included 11 measures – 3 for the present study) to complete while the child was given one of 4 counterbalanced questionnaire packets including 3 measures, the Adapted Child-PARQ/Control, the Loneliness and Social Dissatisfaction Questionnaire (LSDQ), and the Adapted SDQ-I. The child questionnaires were administered by a trained graduate student (See Appendix F for

procedures for administration of child questionnaires). The graduate student read directions and items aloud and recorded the child's responses in order to prevent any difficulties the child may have had with reading the measures. In addition, 5-minute breaks were taken every 20 minutes to prevent fatigue in the child. Following the completion of the child questionnaires, the child was allowed access to a number of age appropriate toys and was supervised by the researcher. After completion of all measures, the parent was allowed to endorse a letter (see Appendix G) addressed to the child's teacher asking them to complete two questionnaires, the ADHD-RS-IV: SV and the TRS. See Appendix H for procedures for completing the teacher letter, which are included in PCIA-Day Administration Instructions. To ensure confidentiality, the child's name was on the letter to the teacher only, and the child's number (not name) was on the actual measures that the teacher completed. A self-addressed envelope was attached for the teachers to return the measures to the researcher. Each teacher was sent five dollars for compensation after returning the completed questionnaires.

Problems with attendance and attrition in research with families have been historically evident. Thus, it is standard procedure to offer participants in family studies the types of support they may need to make participation possible. In the present study, parent-child dyads were offered childcare, snacks, and prizes during their participation. In addition, financial incentives were needed to make it worthwhile for families to relinquish a few hours of their Saturday to participate in the study. Therefore, dyads were paid ten dollars per hour for their time (usually about three hours). Following completion of the study, parents received a debriefing form (see Appendix I).

CHAPTER 3

Results

Data Preparation

This study examined the relationship between parental empathy and child adjustment factors in children with and without ADHD. For each statistical analysis, the predictor/independent variables included three measures of parental empathy, each presenting a unique perspective. The AAPI-2 Inappropriate Expectations Scale score, the PCIA Positive Parent Responsiveness score, and the Child-PARQ Total Rejection score provided parent, observer, and child reports, respectively. Prior to conducting analyses, all dependent and independent variables were examined for both the ADHD sample and the whole sample (ADHD group and Control group combined) to determine if statistical assumptions were met.

The assumption of normality is required for both Multivariate Analysis of Variance (MANOVA) and multiple regression analyses. For the ADHD sample (to be used in Hypotheses 1-4), several of the dependent variables violated the Shapiro Wilks test of normality, including the LSDQ Total score, the TRS Social Acceptance score, and the CBCL Aggression score. Following a squared transformation on the LSDQ Total Scores and log transformations on the TRS Social Acceptance scores and the CBCL Aggression scores, these variables met the assumption of normality. The PCIA Child Aggression score did not meet the assumption of normality and was positively skewed,

due to the high frequency of “0” ratings for this score. Transformations were attempted and found to be unhelpful in meeting the normality assumption. Similarly, for the whole sample (to be used in Hypothesis 5), a squared transformation with the LSDQ was attempted and found to be of no help in normalizing the distribution. Although all variables did not meet the assumption of normality, the analyses were conducted because multiple regressions and MANOVA’s are known to be fairly robust when the assumption of normality is not met (Weinfurt, 1995). The data for each of the dependent variables presented was, therefore, considered to be valid for the purposes of analyses in the present study.

The other assumptions of the multiple regression include non-collinearity between predictors, linearity between the independent and dependent variables, and homoscedasticity. The assumption of non-collinearity between predictors was met as the correlation between the predictors did not exceed a correlation of .60. The assumptions of linearity and homoscedasticity were investigated utilizing scatterplots, which plotted predicted values on the X-axis and standardized residuals on the Y-axis. Based on this examination, it was determined that there were no violations of these assumptions. Due to the number of analyses, separate Bonferroni Corrections were made for primary and exploratory analyses. Therefore, both primary and exploratory analyses were considered significant if $p < .01$.

Another assumption of the MANOVA, the assumption of homogeneity of covariance, was met on all analyses based on Box’s Test of Equality of Covariances. For

the univariate analyses, the assumption of homogeneity of variance was met based on the Levene's Test for Equality of Variances on all analyses.

Parental Empathy and Child Self-Esteem

Primary analysis. A simple multiple regression (MR) analysis was performed to determine the predictive power of parental empathy variables on ADHD children's self-esteem. The dependent variable was the SDQ-I General Self Scale score. Forty-nine parent-child dyads had completed all four measures used in this analysis. Results indicated a trend in the expected direction with the combination of parental empathy variables accounting for nearly 8% of the variance in child self-esteem scores $F(3, 45) = 2.3, p = .09, Adj. R^2 = .077$. Of the three predictors, the AAPI-2 Inappropriate Expectations Scale score was the most important variable ($Beta = .34, t = 2.3, p = .02, sr^2 = .10$, see Appendix A, Tables 5 and 6).

Exploratory analyses. An exploratory MR analysis was performed on the ADHD and Control group participants combined, with the SDQ-I General Self Scale score as the dependent variable ($N = 80$). Results indicated another trend in the expected direction with the combination of parental empathy variables accounting for 5% of the variance in child self-esteem scores $F(3, 76) = 2.5, p = .07, Adj. R^2 = .052$. Of the three predictors, the Child PARQ Total Rejection score was the most important variable ($Beta = -.30, t = -2.6, p = .01, sr^2 = .08$). The beta weight reflects the negative correlation between the Child PARQ Total Rejection score and the child self-esteem score. Higher Child PARQ Total Rejection scores indicate a higher level of parental rejection, and thus, children with more rejecting parents had a lower self-esteem (See Appendix A, Tables 7 and 8).

To examine specific dimensions of child self-esteem on the SDQ-I subscales, exploratory hierarchical MR analyses were performed on the ADHD and Control group participants combined, with group status entered first and parental empathy variables entered together in the second step. In the first MR, the dependent variable was child self-esteem regarding the parent-child relationship, as measured by the SDQ-I Parent Relations Scale score. The combination of parental empathy variables was a significant predictor, accounting for 12.5% of the variance in child self-esteem scores $F(4, 75) = 3.8, p = .007, Adj. R^2 = .125$. Of the three parental empathy predictors, the Child PARQ was the most important variable ($Beta = -.41, t = -3.6, p = .001, sr^2 = .14$, see Appendix A, Tables 9 and 10). MR analyses performed on other subscales of the SDQ-I included self-esteem regarding physical abilities, physical appearance, peer relations, and academic abilities. Parental empathy variables did not significantly predict child self-esteem on these dimensions.

Parental Empathy and Child Peer Acceptance

Primary analysis. Another MR analysis was performed to examine the predictive power of parental empathy variables on the ADHD child's peer acceptance, as measured by the LSDQ Total score. Forty-nine parent-child dyads had completed all measures included in this analysis. The combination of parental empathy variables did not significantly predict child peer acceptance scores $F(3, 45) = 1.3, p = .28, Adj. R^2 = .019$ (See Appendix A, Tables 11 and 12). However, it is important to note that the simple correlation between the PCIA Positive Parent Responsiveness scores and LSDQ Total

scores was significant and in the positive direction, $r(49) = .28, p < .05$ (See Appendix A, Table 11).

Exploratory analysis. Due to the small number of ADHD children with scores for both the LSDQ and teacher-report measures, child peer acceptance measured by the TRS Social Acceptance Scale scores were examined in an exploratory MR analysis. Parental empathy variables did not significantly predict child Social Acceptance scores on the TRS $F(3, 38) = .27, p = .845, Adj. R^2 = -.076$ (See Appendix A, Tables 13 and 14).

Parental Empathy and Child Compliance

Primary analysis. In examining the predictive power of parental empathy variables on the ADHD child's compliance behavior, a MR analysis was performed. The dependent variable was the PCIA Child Compliance score, which is the percentage of child compliance to parent commands during the PCIA. Parent and child scores for this analysis were available for 43 dyads. Parental empathy variables did not significantly predict child compliance during parent-child interactions $F(3, 39) = .038, p = .99, Adj. R^2 = -.074$ (See Appendix A, Tables 15 and 16).

Parental Empathy and Child Aggression

Primary analysis. Another MR analysis was performed with parent-child dyads to examine the predictive power of parental empathy variables on aggression in ADHD children. The dependent variable was the CBCL Aggression Scale score. Before Bonferroni adjustment, the combination of parental empathy variables significantly predicted child aggression scores, accounting for nearly 15% of the variance on this measure $F(3, 43) = 3.674, p = .02, Adj. R^2 = .148$. Of the three predictors, the PCIA

Positive Parent Responsiveness score was the most important variable ($Beta = -.38, t = -2.7, p = .009, sr^2 = .14$). In addition, the AAPI-2 Inappropriate Expectations score was an important variable ($Beta = -.29, t = -2.0, p = .05, sr^2 = .08$, see Appendix A, Tables 17 and 18).

Exploratory analyses. Since the CBCL Aggression Scale scores were not correlated with the PCIA Child Aggression score, this measure was examined independently in an exploratory MR analysis. The dependent variable was the frequency of child aggressive behaviors toward self and others during the PCIA. The combination of parental empathy variables did not significantly predict child aggression during the PCIA for the ADHD group $F(3, 45) = .205, p = .893, Adj. R^2 = -.052$ (See Appendix A, Tables 19 and 20).

Another exploratory hierarchical MR analysis was performed on ADHD and Control group participants combined, with group status entered first and parental empathy variables entered together in the second step ($N = 79$). The dependent variable was the mean of child aggression toward self and others during the PCIA. Before Bonferroni adjustment, ADHD status was a significant predictor, accounting for 6% of the variance in child aggressive behavior $F(1, 77) = 6.07, p = .02, Adj. R^2 = .061$. The combination of parental empathy variables, however, was not a significant predictor $F(4, 74) = 1.835, p = .131, Adj. R^2 = .041$ (See Appendix A, Tables 21 and 22).

Parental Empathy, ADHD Status, and Child Adjustment

Primary analyses. Two 2x2 multivariate analyses of variance (MANOVA) were performed to examine the relationship between level of parental empathy (high versus

low) and group status (ADHD versus Control) on child adjustment variables. Scores from the three measures of parental empathy (AAPI-2 Inappropriate Expectations Scale score, Child PARQ Total Rejection score, and PCIA Positive Parent Responsiveness score) were converted to standard scores and averaged to obtain a composite “Parental Empathy” score, which was the independent variable in both MANOVAs. High and low parental empathy groups were created by using a median split on the Parental Empathy composite score. In the first MANOVA, the dependent variables were child self-esteem and peer acceptance, measured by the SDQ-I General Self score and the LSDQ Total score respectively. Although significance for the overall model was not met, there was a trend in the expected direction for the main effect of parent empathy level $F(2, 86) = 2.49, p = .089$. Children of high empathy parents scored higher on peer acceptance ($M = 41.47, SD = 5.36$) than children of less empathic parents ($M = 38.33, SD = 7.05$) $F(1, 87) = 4.8, p = .032$. The effect size for this analysis was high ($d = .49$), suggesting that these results are practically meaningful. There was not a significant main effect for ADHD group status $F(2, 86) = .107, p = .899$ (See Appendix A, Tables 23 and 24).

In the second MANOVA, the dependent variables were child compliance and aggression, measured by the PCIA Child Compliance and Aggression scores. Before Bonferroni adjustment, results indicated a main effect of parent empathy level $F(2, 69) = .3.47, p = .037$. Children of high empathy parents scored lower on the PCIA Child Aggression score ($M = 2.34, SD = 1.99$) than children of less empathic parents ($M = 1.19, SD = 1.31$) $F(1, 70) = 6.8, p = .011$. The effect size for this analysis was high ($d = .67$), suggesting that these results are practically meaningful. There was not a significant main

effect for ADHD group status $F(2, 69) = 1.97, p = .147$. In examining the univariate results, however, there was a trend in the expected direction for the relationship between child aggression and ADHD group status. Children with ADHD scored higher on the PCIA Child Aggression score ($M = 2.01, SD = 1.81$) than Control group children ($M = 1.23, SD = 1.54$) $F(1, 70) = 3.7, p = .058$. The effect size for this analysis was high ($d = .70$), suggesting that these results are practically meaningful (See Appendix A, Tables 23 and 25).

CHAPTER 4

Discussion

The purpose of this study was to explore one of the primary tenets embedded in clinical child psychology, that a relationship exists between parenting attitudes and behaviors and child functioning. Given that children with ADHD experience unique challenges related to this disorder, parental empathy was believed to be especially important for these children. It was hypothesized that among parent-child dyads with ADHD children, parental empathy would significantly predict greater psychological, social, and behavioral child adjustment.

Parental Empathy and Child Self-Esteem

The first hypothesis stated that higher levels of parental empathy would predict higher levels of self-esteem among children with ADHD. Results indicated a non-significant trend in the expected direction for parental empathy predicting general child self-esteem. Specifically, parents who reported having more realistic expectations for their ADHD child were more likely to have children with higher self-esteem scores. This finding is consistent with prominent child development theories, which assert that a child's concept of self is largely influenced by parental attitudes and expressions of empathy (Kohut, 1977; Landreth, 1991; Rogers, 1951). With a more realistic understanding of the child's developmental capabilities, the parent is likely to be more accepting of the child and his or her limitations. A child who perceives unconditional parental acceptance learns that he

or she is regarded as an individual of worth no matter what he or she does (Rogers, 1961). When faced with parental expectations that are consistent with the child's ability, the child likely feels more capable of meeting those expectations. The end result is a greater sense of overall competence for the child. However, inappropriate or unrealistic parental expectations may cause the child to feel a sense of failure and inadequacy, thereby resulting in lower overall self-esteem.

To expand the investigation of the relationship between parental empathy and child self-esteem, non-ADHD children were included in analyses of general and specific dimensions of self-esteem. A non-significant trend indicated that higher parental empathy predicted higher general self-esteem scores for ADHD and Control group children. Specifically, children who rated their parents as being more rejecting were likely to report having lower general self-esteem. In addition, these children were significantly more likely to report having lower self-esteem regarding their relationship with their parents. This is consistent with Snow's (1995) finding that adolescents who perceived greater parental understanding had significantly healthier self-concepts and lower levels of anxiety and depression than adolescents who perceived less parental understanding. Together, these findings highlight the importance of parental empathy to the child's evolving sense of self. Parental understanding and acceptance is not only related to the development and maintenance of healthy self-esteem for children, but it also affects the quality of the parent-child relationship. In the present study, children who perceived their parents as more rejecting reported more difficulty in relationships with their parents.

Although the relationship between children's perceptions of their parents and their own self-esteem may reflect shared method variance (since they are both child reports), these perceptions may have marked influence on the child's psychological well-being.

Whereas parental empathy predicted child self-esteem regarding the parent-child relationship, it was not a significant predictor of other domains of child self-esteem regarding physical abilities, physical appearance, peer relations, or academic abilities. Thus, it seems that only the child's global self-worth and perceptions of their relationship with their parents are related to the parent's level of empathy, and the child's domain-specific self-perceptions may be less affected by parental empathy. Another explanation is that the ADHD children may have exhibited a positive illusory bias in their self-evaluations on these specific domains. Investigators have argued that inflated self-perceptions serve a self-protective role for ADHD children, allowing them to portray a competent self-image and cope with their difficulties (Hoza, Pelham, Dobbs, Owens, & Pillow, 2002; Ohan & Johnston, 2002). Hoza et al. found that ADHD boys overestimated their self-perceptions more than controls in academic, social, and behavioral domains, compared to teacher reports. Similarly, Ohan & Johnston reported a "self-enhancing bias" in ADHD boys' estimates of their social and academic performance (p. 238). Specifically, boys with ADHD tended to overestimate their likeability compared to how much the teacher actually liked them, whereas non-ADHD boys did not. Similarly, ADHD children in the present study may have compensated for their inadequacies in physical, social, and academic functioning by assuming an unrealistically positive self-

presentation. This over-estimation of their abilities likely masked feelings of inadequacy and protected the child from experiencing feelings of failure.

Parental Empathy and Child Peer Acceptance

The second hypothesis stated that higher levels of parental empathy would predict higher levels of peer acceptance among children with ADHD. This hypothesis was not supported with child- or teacher-report measures of peer acceptance. Perhaps children's self-report of peer acceptance may have been inflated due to a positive illusory bias. Children's positive responses on the peer acceptance measure may have stemmed from a self-protective coping mechanism. The child's belief that he or she is well liked and accepted by peers may protect him or her from experiencing feelings of loneliness and social isolation. It also could be that children responded in an overly positive manner in a more deliberate attempt to appear socially acceptable. However, results were similar with teacher-reported peer acceptance. This may be an artifact of low statistical power due to the relatively low number ($n = 32$) of children with scores on the teacher-report measure and the three parental empathy predictors. A higher return rate for the teacher-report measure may have produced greater variability among peer acceptance scores. In addition, results may have been affected by the lack of depth in the TRS Social Acceptance Scale, which includes only three items. A scale with more items may provide a more accurate assessment of children's peer acceptance.

Although parental empathy measures did not significantly predict peer acceptance for ADHD children, positive parent responsiveness was positively correlated with child-reported peer acceptance. Recent studies have supported these findings. Johnston et al.

(2002) found that maternal responsiveness to the needs and behaviors of ADHD children was negatively related to child conduct problems. Similarly, warm and supportive parenting practices have been associated with high levels of child prosocial behavior and low levels of child aggression (Domitrovich & Bierman, 2001). The direction of this relationship was not determined, however, it is likely that a reciprocal relationship between parent and child factors exists. Parents who respond positively to their child may foster feelings of social competence, which increases the child's perception of peer acceptance. Further, by modeling positive responding to their child, parents may facilitate the development of social skills for their children. Positive communication with children may provide children with a better understanding of social norms and may enable children to consider the outcomes and interpersonal impact of their behaviors (Domitrovich & Bierman, 2001). Thus, through positive interactions with their parent, children learn how to respond positively in interactions with others. As a result, children develop more positive interpersonal relationships and are more likely to be accepted by their peers. For the ADHD child who lacks impulse control, this interpersonal skill may be especially important. Positive interactions allow opportunities for implicit learning of basic skills such as listening, waiting, trying, and controlling impulses, which are valuable in social and academic situations (Heriot, Evans, & Foster, 2001). By practicing these positive behaviors, children may elicit more positive responses from their parents. The opposite pattern may also apply. It may be more difficult for parents to respond positively to children who are oppositional and difficult to manage. Parents who are not responsive or who respond negatively to their child may send a message to the child that

he or she is not worthy of acceptance. As a result, the child may continue misbehavior, which negatively affects interpersonal relationships and elicits more negative parent responses.

Parental Empathy and Child Compliance

The third hypothesis stated that higher levels of parental empathy would predict higher levels of compliance among children with ADHD. This hypothesis was not supported. That is, the parents' level of empathy was not related to children's compliant responses during the parent-child interaction task. Child compliance was measured by the number of parental commands divided by the number of child responses that were compliant with those commands. Due to the large number and variety of parent commands and child responses, coding child compliance was a laborious task. Student coders reported having difficulty distinguishing between types of child responses. Although coders generally were able to distinguish when the child either complied (YES) or did not comply (NO) with the parents' commands, coding was less clear when the child's verbalization was incongruent with the behavior (INC) or when the child did not respond to the commands (IGN, AVD, NTC). These coding difficulties may have contributed to the moderate percent agreement (66%) among child compliance coders. As a result, the distinction between compliant and noncompliant children may have been clouded, which may have affected the ability to predict child compliance from parent empathy levels. Establishing a higher percent agreement among coders may have improved the accuracy of the child compliance measure.

In addition to compliance coding error, the results may have been affected by the demanding nature of the compliance measure. Two PCIA scenarios, “Waiting” and “High Rock” were selected to assess child compliance, due to the opportunities they provide for parents to make commands and suggestions to their child. During the “Waiting” scenario, parents often request that the child engage in a particular behavior or wait, while the parent talks with a friend. The “High Rock” scenario often elicits parental discipline because the child is placed in a dangerous situation. However, it is possible that utilizing two of the most demanding PCIA scenarios may have restricted the variance in child compliance scores. Given that these two scenarios tend to elicit child noncompliance, even generally compliant children may have rebelled against their parents’ commands. Thus, children of highly empathic parents may have demonstrated noncompliant behavior due to the demanding nature of the story stem, thereby diminishing differences between compliance scores. Perhaps utilizing more PCIA scenarios would have allowed more opportunities for variance in child compliance.

In addition to the variability in the number of parental commands, children may respond differently to various types of commands. The present study measured child compliance in response to alpha and beta commands in combination. Alpha commands are more directive, whereas beta commands tend to be indirect and vague. However, parental empathy may have been a more significant predictor of child compliance in response to only one of these command types. Differences between alpha and beta commands may be especially important for ADHD children, who experience difficulty paying attention and following directions. Children with ADHD may respond more

effectively to clear, directive, positively framed commands, as opposed to indirect suggestions and negative commands. In a study of dyadic interactions between “hard to manage” children and their mothers, Brophy and Dunn (2002) distinguished between positive and negative parental control. Positive control was defined as “a direct, reasonable, and clearly stated request,” and included using praise, scaffolding, and teaching/suggesting alternatives to the activity being carried out (p. 107). In contrast, negative control was defined as one of the following: “a) immediate compliance was demanded; b) aversive consequences were implicitly or actually threatened if compliance was not immediate from the person; and c) sarcasm/humiliation was directed toward the other person” (p. 107). Mothers of “hard to manage” children tended to use more negative control strategies than comparison group mothers. However, it is unclear how often these parents used positive control strategies and how children responded to each type of strategy.

Another important factor may have been the presentation of the task. During the PCIA, the administrator provided the story stems, or the “instructions” for the parent-child interaction. It is possible that this presentation may have decreased external validity of the measure by affecting both the number of parent commands and the child’s compliance to the commands. Parents may have been more commanding, in an attempt to follow the administrator’s story stem. For example, the story stem for the “Waiting” scenario states, “Mom/Dad sees a friend and wants [child’s name] to wait while he/she talks with their friend. [Child’s name] wants to go and play. Play out what happens together.” However, children may have been more compliant, in response to the

administrator's authority, rather than their parent's commands. Thus, as a result of the PCIA analogue observation procedures, the parent and child may not have exhibited their "typical" behavior patterns. Perhaps a more appropriate measure of child compliance would include a more structured, *parent-directed* task such as the clean-up task described in DuPaul et al., 2001). DuPaul et al. found that children with ADHD exhibited more than twice the level of noncompliance than controls when asked to complete activities and tasks by their parents. However, they found minimal group differences in interactions during the low adult attention situation, suggesting that for children with ADHD, noncompliant behavior is more likely to occur when the parent directs the tasks.

The presence of the administrator during the parent-child interaction may have also affected parent and child responses, due to social desirability. Although the administrator was trained to remain neutral, parents and children may not have demonstrated their "usual" responses. Parents may have been more or less directive, and children may have been more compliant in an effort to present more socially accepted behaviors. Further, being in a university psychology clinic or private school environment may have affected the parent-child interaction, especially for less educated parents who may have never been in such facilities. However, these potential effects are a small price to pay for the wealth of information that can be obtained from utilizing an observational measure of parent-child interaction. Many studies are unable to capture the complexity of parent-child interactions, due to their reliance on only parent-report measures, which contain their own set of limitations. Researchers agree that observational ratings are the ideal source for examining and understanding parent-child interactions (Domitrovich &

Bierman, 2001). In addition to an observational measure, parent and teacher reports of child compliance may have provided information about the child's behavior in everyday contexts.

Parental Empathy and Child Aggression

The fourth hypothesis stated that higher levels of parental empathy would predict lower levels of aggression among ADHD children. Results indicated a non-significant trend for parental empathy predicting parent-reported child aggression. Specifically, parents who reported having more realistic expectations of their child and who responded positively to their child during the PCIA task were likely to report their children as being less aggressive. Furthermore, results indicated a trend for child ADHD status predicting child aggression on the PCIA task. If ADHD children are more likely to be aggressive than non-ADHD children, the parent-child relationship among ADHD children likely has unique characteristics as a result. East (1991) found that aggressive boys perceived less warmth, support, and satisfaction within their father-child relationships than non-aggressive children. Likewise, parents of aggressive children perceived low levels of warmth, involvement, and satisfaction with their parent-child relationships (East; Stormshak et al., 2000). These results are consistent with other investigators who reported a relationship between negative parenting and child conduct problems and aggression among dyads with ADHD children (Gomez & Sanson, 1994; Heller & Baker, 2000; Pettit & Bates, 1989). Early deficits in parental warmth may be critical in the development and maintenance of oppositional and aggressive behavior (Stormshak et al.). However, positive parenting behaviors may be related to lower levels of child

misbehavior. In fact, positive parenting has been found to be more strongly related to child behavior than negative parenting (Russell & Russell, 1996). Parents who have realistic expectations of their children are likely to interact with their child in a more accepting and positive manner. As discussed earlier, positive parenting practices, such as demonstrating realistic expectations and positive responsiveness toward the child, may foster a sense of competency and the development of healthy interpersonal skills. As a result, the child may be more likely to behave appropriately and inhibit the display of aggressive behavior in interpersonal interactions.

Although there was a trend toward parental empathy predicting parent-reported child aggression, parental empathy did not predict child aggression during the PCIA task, even when non-ADHD children were included. Several factors may account for this discrepancy. First, since parental empathy did not predict child compliance during the PCIA, it follows that PCIA aggression scores would not be predicted, as aggression and compliance are related constructs. As discussed earlier, children may have been more compliant during observed parent-child interaction than in other settings. Because the children may have behaved more appropriately than usual, parents may have been more likely to engage in positive interactions with the child. These positive interactions, in turn, may have inhibited child aggression.

Second, the low correlation between the parent-report measure and the observation ratings of child aggression may have been related to the different behaviors assessed by these measures. The PCIA Child Aggression code assesses direct, visible aggression toward self, parent, or objects. It does not account for indirect forms of

aggression that are included on the CBCL Aggression Scale, such as arguing, screaming, and teasing. In addition, the CBCL Aggression Scale includes a host of behaviors that may or may not be intentionally aggressive. Examples include showing off or clowning, having sudden changes in mood or feelings, talking too much, and being unusually loud. Relationships among the CBCL Aggression Scale scores and observed child aggression during the PCIA may have been more clear if these measures had been more parallel, involving more similar items and behaviors.

Third, simply getting direct focused attention from their parents during the PCIA may have been enough to inhibit child aggressive behavior during this brief interaction, even for children who may be described as aggressive in general. The PCIA story stems set the stage for parent and child involvement in working together to play out various real-life situations. Each scenario may elicit parent and child verbalization, eye contact, and physical contact with one another. Whether these parent-child interactions were primarily positive or negative in nature, the experience of having such focused attention with one another was likely an atypical occurrence for most dyads. During PCIA administration, several parents reported that they did not play with their child in this manner at home. In a society of economic stress, many parents face extensive career-related time commitments to maintain their standard of living, leaving little one-on-one time to devote to their children. However, children need time for emotional sharing with their parents, and this time is essential for healthy psychological development (Landreth, 1991). By spending approximately 30 minutes playing together, the children's need for attention and emotional sharing with their parents may have been met. As a result, the

children may have been less likely to act out aggressively in an attempt to fulfill their emotional needs.

Parental Empathy, ADHD Status, and Child Adjustment

The fifth hypothesis predicted a significant positive effect of parental empathy on child adjustment measures of self-esteem, peer acceptance, compliance, and aggression, regardless of whether or not the child had ADHD. Results indicated a trend for children of more empathic parents scoring higher on peer acceptance and lower on observed aggression. There were no significant differences between children of high and low empathy parents on measures of self-esteem and compliance. These findings are inconsistent with previous results in which parental empathy did not predict peer acceptance or aggressive behavior for ADHD or Control group children. However, when parents were forced into high and low empathy groups, differences between them became more prominent, resulting in a stronger association with child adjustment variables. Thus, it seems that a child may be more likely to be affected by parents on the ends of the empathy spectrum, as opposed to parents who may fall somewhere in the middle. Under these circumstances, perhaps few parents in the present study demonstrated extremely high or low levels of empathy, with the majority of parents falling in the average range. As a result, parental empathy scores were unable to significantly predict child adjustment scores.

Finally, it was hypothesized that children with ADHD would score significantly more maladjusted on measures of child adjustment, compared to children without ADHD. Indeed, ADHD children were more aggressive during the PCIA than children in

the Control group. By definition, children with ADHD are more hyperactive and impulsive, which may cause them to act out aggression more than non-ADHD children, who have stronger impulse control to inhibit aggressive responding. In addition, ADHD children tend to have a low frustration tolerance, which may trigger anger and aggression more often for these children. As previously discussed, children with ADHD reported difficulties in relationships with their parents. The parents of children with ADHD have been found to use more punitive parenting strategies, compared to those of non-ADHD children (Gomez & Sanson, 1994; Pettit & Bates, 1989; Stormshak et al., 2000). As a result of the ADHD child's inattention, hyperactivity, and impulsivity, teachers, parents, and caregivers are likely to engage in frequent attempts at discipline. The ADHD child may perceive these discipline efforts as personal attacks, causing the child to defend him/herself through aggression.

Although children in the ADHD group were more aggressive than those in the Control group, there were no significant differences between these groups on measures of self-esteem, peer acceptance, and compliance. These results are puzzling, given that the literature is flooded with evidence to the contrary. Research has consistently documented that children with ADHD are more rejected and less accepted by their peers (Stormont, 2001). These interpersonal deficits appear to stem from the behaviors associated with ADHD, irrespective of the child's gender (Greene et al., 2001). Further, children with ADHD have been found to exhibit more frequent noncompliance and inappropriate behavior than non-ADHD children (Barkley et al., 1991; Befera & Barkley, 1985;

DuPaul et al., 2001). The following discussion of limitations may afford a deeper understanding of this discrepancy and serve as a guide for future studies.

Limitations and Directions for Future Research

Conclusions based on the results of the present study are tentative, due to the lack of significant associations between parental empathy and child adjustment variables. However, based on previous research linking negative parenting and low levels of positive parenting to various child adjustment problems, results of the present study were an anomaly. One possible explanation for the inconsistency is the use of different observational, self-, parent-, and teacher-report measures to assess each construct of interest. For example, Greene et al. (2001) assessed children's social functioning with the Social Adjustment Inventory for children and Adolescents (SAICA), which is a parent-report measure administered in an interview format. In the present study, social functioning was assessed with the Loneliness and Social Dissatisfaction Questionnaire (a child-report measure) and the Teacher Rating Scale. Although these measures tap into the child's social arena, each provides a different perspective, which may account for the differences in findings. Similarly, observational measures varied widely across studies, from in-home (Brophy & Dunn, 2002; Gardner, 1994; Pettit et al., 1997; Russell & Russell, 1996) to laboratory settings (Befera & Barkley, 1985; DuPaul et al., 2001; Johnston et al., 2002; Rothbaum, 1988), including an assortment of activities. Observational studies of parent-child interaction utilized naturalistic observations (Gardner, 1994), parent-directed tasks (Johnston et al., 2002), administrator-directed tasks (Brophy & Dunn; Denham et al., 1991; Wagner & Phillips, 1992), free-play

(Webster-Stratton & Eyberg, 1982), parent-child discussions (Buhrmester et al, 1992), and some combination of these (Cunningham & Barkley, 1979; DuPaul et al.; Rothbaum). In contrast, the present study utilized the PCIA, an analogue observation technique, which provides opportunities for free-play interactions, as well as a series of co-construction tasks (Holigrocki et al., 1999). Each distinctive method approaches the study of parent and child behavior in a different manner, providing more room for variability in findings.

In addition to variations in the measure of parent and child variables, major differences have emerged in the definition of “positive parenting” practices. The concept of positive parenting has been defined with dozens of labels, such as empathy, attunement, availability, involvement, openness, participation, and sensitivity (Rothbaum & Weisz, 1994). Furthermore, numerous studies have investigated various aspects of parental empathy, including warmth, support, synchrony, and involvement (e.g., Barber et al., 2001; East, 1991; Gardner, 1994; Motley, 1986; Patterson et al., 1989; Pettit et al., 1997; Robins, 2000). Many studies that have included a broader concept of parental empathy, rather than some component of empathy as described above, utilized self-report measures (e.g., Bernath, 1997; Snow, 1995). None, including the present study, have assessed a construct that incorporated all of these aspects in a direct observation of parent-child interaction with ADHD children. The present study intended to fill this void in the literature by developing and utilizing a more global measure of parental empathy, the Global Assessment of Parental Attunement (GAPA). The GAPA is an observational rating scale to assess parental attunement in parent-child interactions. It consists of five

subscales, including Physical Relatedness, Verbal Relatedness, Emotional Synchrony, Attentiveness, and Promotion of Initiative, which are rated on a four-point scale (Misattuned, Some Misattunement, Some Attunement, and Attuned). Items from the GAPA were developed from the literature on parental empathy and attunement, as well as from the Parental Attunement Scale (PAS; Holigrocki, Frieswyk, Kaminski, Betan et al., 1999) and the adapted Measurement of Empathy in Adult-Child Interaction (MEACI; Bratton, 1994).

The GAPA was intended to be used as a measure of parental empathy in the present study. Three graduate students in Clinical and Counseling Psychology programs were trained using archived PCIA videotapes. However, due to the extensive time commitment and difficulty in assessing intangible aspects of empathy, such as emotional synchrony and acceptance, an adequate level of inter-rater reliability was not achieved. As a result, the GAPA was discontinued, and other measures of parental empathy were substituted (i.e., AAPI-2 Inappropriate Expectations Scale, PCIA Positive Parent Responsiveness code, and Child PARQ Total Rejection Scale). As a result, the study included discrete aspects of parental empathy from various perspectives, as opposed to assessing the combination of these aspects within the parent-child interaction. Future studies of parent-child interaction would benefit from utilizing a global measure such as the GAPA, which captures both positive and negative dimensions of parental empathy in a direct observation approach.

Aside from the difficulties in measurement, the study of parent-child interaction presents its own set of challenges. Researchers must remember that child behavior is

affected by multiple factors. Child characteristics, such as intelligence, physical attractiveness, attention skills, impulse control, and temperament may affect the quality of the child's self-concept and interpersonal relations in ways that are not highly influenced by parenting practices (Domitrovich & Bierman, 2001). Therefore, any conclusions regarding the relationship between parental empathy and child adjustment are likely to only present a partial explanation of child phenomena more generally. Furthermore, parental empathy was associated with child aggression and peer acceptance, a causal relationship cannot be determined. As a result, interpretation of the relationship is limited in terms of the predictive function of parenting in the development of child adjustment problems. It is likely that a reciprocal relationship exists, whereby child difficulties impact parents' ability to demonstrate empathy, just as parental empathy affects child functioning. Problems experienced by families of children with ADHD may not simply reside in the parenting practices or the child behavior, but instead may be a feature of the *interaction* between the parent and child. Studies that assess this interaction, rather than focusing on parent and child factors independently, may provide a valuable contribution to understanding the nature of difficulties for ADHD children and their families.

In addition to accounting for child characteristics and parent-child interactional influences, it is important to consider the context of symptoms associated with ADHD. ADHD characteristics do not occur in isolation of other significant difficulties. Given the high rate of comorbid disorders in ADHD, such as anxiety, conduct disorders, and learning problems, it may be difficult to distinguish group differences based on the

presence or absence of ADHD (DuPaul et al., 2001; Whalen et al., 2002). Such comorbidity within the ADHD group may have prevented apparent differences in self-esteem, peer acceptance, and compliance between ADHD and non-ADHD children. In addition, some comorbid symptoms may be associated more with one subtype of ADHD than another. Since the current diagnostic system does not view ADHD as a unidimensional construct, it is recommended that future studies investigate ADHD subtypes separately, rather than combining them into a heterogeneous group. However, subtype effects were likely to be minimal to nonexistent, due to the limited number of children who were diagnosed with primarily Inattentive Type ($n = 2$) or Hyperactive/Impulsive Type ($n = 1$). In addition, recruitment from a community-based population, rather than from a clinical population may have helped to limit the rate of co-morbidity among children in the sample.

Not only should investigators examine contextual factors related to symptomatology, but one must also take into account the effects of social desirability. Parent and child-report measures may have reflected positively biased perceptions, which may have impeded the ability to detect differences between groups. For example, it is possible that inappropriate parental expectations may have been less prevalent in this sample due to parents underestimating their use of these practices in an effort to appear socially appropriate. Parental responses may reflect the extent to which parents are socially aware of acceptable parenting, especially given the education level among participants in this sample. More objective assessment of parental empathy, such as direct observations may be less susceptible to rater bias than parent reports. Also, future studies

may benefit from assessing parent and child perspectives with self-report measures that include a social desirability scale.

Another limitation of the study is the lack of ethnic variance among participants. There may be ethnic group differences in parenting practices, including parents' expectations of their children and their display of positive responsiveness and empathy. With a small number of ethnic minorities, these differences could not be addressed. In addition, the study included an overrepresentation of mother-child dyads, with the majority of child participants being male. Males and females may experience different types of problems, and thus, it may be more appropriate to study them separately. In a meta-analysis of gender differences in ADHD children, girls with ADHD had lower ratings on externalizing problems and higher ratings on internalizing problems (Gershon, 2002). Since the ADHD and Control groups included a combination of boys and girls, these gender differences may have masked significant differences in self-esteem, peer acceptance, and compliance between the groups. Further, parenting behaviors may have been affected by gender differences, as parents may respond differently to boys and girls. Similarly, mothers may demonstrate empathy in a different manner than fathers. Therefore, in addition to studying boys and girls separately, it may be necessary to examine differences in mother-child and father-child dyads. Because this sample represented primarily non-clinical, white, well-educated, married, middle class mother-child dyads, generalization to more diverse populations cannot be assumed. Generalizations from the present study may also be limited by the use of voluntary participation. Individuals who volunteer to participate in research may be inherently more

empathic than average. However, the flyers used to recruit participants stated that parent-child dyads would receive ten dollars per hour to compensate for their time. Thus, the monetary incentive may have dampened the volunteer effect somewhat.

In addition to limited generalizability, the use of a relatively stringent alpha level (i.e., $p < .01$) may have restricted the findings to large between-group differences. These findings require replication with a larger sample using a similar comprehensive battery of assessment measures. Recruiting a larger number of participants from the community and including more girls, fathers, and ethnic variability, would allow generalization to a larger population. In addition, it may be important to consider the relationship between parental empathy and child adjustment among other populations of children. ADHD children are not alone in their tendency to experience parent-child relational problems, as well as psychological, social, and behavioral difficulties. Since ADHD children tend to be more aggressive, it may be interesting to explore parental empathy among aggressive children, with and without ADHD. Further longitudinal studies are needed to examine the stability of parenting beliefs and practices and of children's adjustment over time. A longitudinal design would also enable exploration of the reciprocal and bi-directional effects between parental empathy and child adjustment variables.

Conclusions and Implications

This study represents a step toward understanding the relationship between parental empathy and child adjustment factors for children with ADHD. It also delineates differences between children with ADHD and their peers and highlights the benefits of incorporating child, parent, and observer perspectives in the assessment of the parent-

child relationship. Although the discussion has focused on the impact parenting practices may have on child adjustment, reverse effects may also occur. Children who exhibit various kinds of behaviors may elicit certain kinds of parenting, creating bi-directional and reciprocal influences (Rothbaum & Weisz, 1994; Whalen & Henker, 1999). Therefore, to help these children overcome their difficulties, parent involvement is essential. According to Guerney (2000), “Most parents have within them the psychological and emotional wherewithal to make a major contribution to the positive development of their children, given the knowledge and practice, and emotional support to do so” (p. 7). Parent training interventions need to move beyond general behavior modification techniques to include an emphasis on the importance of parental empathy in parent-child interactions. Parents who learn to respond to their child with acceptance and understanding may alter the basis of the parent-child relationship so that it may become more rewarding for both the parent and child. As a result, the child may become more compliant and less aggressive, which would help to improve the child’s interpersonal relationships, thereby increasing self-esteem. Given the prevalence of childhood ADHD and the numerous difficulties associated with this disorder, the potentially significant role of parental empathy in children’s psychological, social, and behavioral adjustment should not be underestimated.

APPENDIX A

Tables

Table 1

Diagnostic Criteria for Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

- (1) six (or more) of the following symptoms of *inattention* have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

- a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- b) often has difficulty sustaining attention in tasks or play activities
- c) often does not seem to listen when spoken to directly
- d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- e) often has difficulty organizing tasks and activities
- f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
- g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)
- h) is often easily distracted by extraneous stimuli
- i) is often forgetful in daily activities

- (2) six (or more) of the following symptoms of *hyperactivity-impulsivity* have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

- a) often fidgets with hands or feet or squirms in seat
- b) often leaves seat in classroom or in other situations in which remaining seated is expected
- c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- d) often has difficulty playing or engaging in leisure activities quietly
- e) is often “on the go” or often acts as if “driven by a motor”
- f) often talks excessively

Impulsivity

- g) often blurts out answers before questions have been completed
- h) often has difficulty awaiting turn
- i) often interrupts or intrudes on others (e.g., butts into conversations or games)

Table 1 (Continued)

Diagnostic Criteria for Attention-Deficit/Hyperactivity Disorder

- B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.
 - C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).
 - D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.
 - E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).
-

Note. From *DSM-IV* (American Psychiatric Association, 1994, pp. 83-84).

Table 2

Descriptive Statistics for Child Participants in ADHD and Control Groups

Variable	ADHD Group (<i>n</i> = 56)		Control Group (<i>n</i> = 37)		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%		
Child Gender					1.44	ns
Male	40	71.4	22	59.5		
Female	16	28.6	15	40.5		
Children's Ethnicity					.01 ^a	ns
Asian American	1	1.8	1	2.7		
African American	2	3.6	1	2.7		
Caucasian	45	80.4	30	81.1		
Hispanic	3	5.4	2	5.4		
Biracial	4	7.1	3	8.1		
Child's Grade					4.30 ^b	ns
1 st grade	6	10.7	8	21.6		
2 nd grade	12	21.4	11	29.7		
3 rd grade	19	33.9	11	29.7		
4 th grade	12	21.4	4	10.8		
5 th grade	5	8.9	2	5.4		
6 th grade	2	3.6	0	0		
Home Schooled	0	0	1	2.7		

Note. χ^2 = Pearson Chi Square; ns = not significant.

^aChi Square analysis run with two groups, Minority vs. Caucasian due to low *n*.

^bChi Square analysis run with 4th and 5th grade combined and without the 6th graders or home-schooled child due to low *n*.

Table 3

Descriptive Statistics for Parent/Guardian Participants in ADHD and Control Groups

Variable	ADHD Group (<i>n</i> = 56)		Control Group (<i>n</i> = 37)		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%		
Parent Gender					.46	ns
Mother	47	83.9	29	78.4		
Father ^a	9	16.1	8	21.6		
Parent's Ethnicity					<.001 ^b	ns
African American	2	3.6	1	2.7		
Asian American	1	1.8	1	2.7		
Caucasian	47	83.9	31	83.8		
Hispanic	5	8.9	3	8.1		
Biracial	0	0	1	2.7		
Other	1	1.8	0	0		
Parent Marital Status					.66 ^c	ns
Never married	2	3.6	1	2.7		
Married	38	67.9	28	75.7		
Separated	2	3.6	1	16.2		
Divorced	12	21.4	6	2.7		
Widowed	1	1.8	1	2.7		
Other: Engaged	1	1.8	0	0		
Parent Education level					.18 ^d	ns
10 th –12 th grade	15	26.8	9	24.3		
Technical School/ Community College	13	23.2	8	21.6		
University degree	19	33.9	14	37.8		
Advanced degree	8	14.3	5	13.5		
Unspecified	1	1.8	1	2.7		

Note. χ^2 = Pearson Chi Square; ns = not significant.

^aIncludes one stepfather.

^bChi Square run with two groups, Minority vs. Caucasian due to low *n*.

^cChi Square run with two groups, Currently married vs. not currently married.

^dParticipants who did not specify an education level were not included in the analysis.

Table 3 (continued)

Descriptive Statistics for Parent/Guardian Participants in ADHD and Control Groups

Variable	ADHD Group (<i>n</i> = 56)		Control Group (<i>n</i> = 37)		χ^2	<i>p</i>
	<i>n</i>	%	<i>n</i>	%		
Parent Income					2.39	ns
<\$30,000	10	17.9	10	27.0		
\$30-60,000	18	32.2	7	18.9		
>\$60,000	28	50.1	20	54.1		
Attended Parenting Classess					1.33	ns
Yes	28	50.0	14	37.8		
No	28	50.0	23	62.2		
Attended Psychotherapy					2.80	ns
Yes	37	66.1	18	48.6		
No	19	33.9	19	51.4		

Note. χ^2 = Pearson Chi Square; ns = not significant.

Table 4

Descriptive Statistics on the Age of the Sample

Variable	ADHD Group (<i>n</i> = 56)		Control Group (<i>n</i> = 37)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Children's Age in Years	8.98	1.21	8.49	1.23	1.88	ns
Parent's Age in Years	39.36	6.79	37.76	6.62	1.12	ns

Note. ns = not significant.

Table 5

Intercorrelations for ADHD Children's General Self-Esteem as Measured by the SDQ-I and Parental Empathy Predictor Variables (n = 49)

Variable	1	2	3
SDQ-I General Self Scale Score	.26*	-.15	.11
Predictor Variables			
1. AAPI-2 Inappropriate Expectations Score	-		
2. Child PARQ Total Rejection Score	-.32*	-	
3. PCIA Positive Parent Responsiveness Score	.02	-.21	-

* $p < .05$.

Table 6

*Regression Analysis Summary for Parental Empathy Variables Predicting ADHD**Children's General Self-Esteem as Measured by the SDQ-I*

Variable	<i>B</i>	<i>SEB</i>	β	<i>t</i>	sr^2
AAPI-2 Inappropriate Expectations Score	.87	.37	.34	2.33*	.105
Child PARQ Total Rejection Score	-.11	.07	-.24	-1.62	.051
PCIA Positive Parent Responsiveness Score	.14	.29	.07	.49	.004

Note. $Adj. R^2 = .077$ ($n = 49$, $p = .087$). sr^2 = squared semipartial correlation.

* $p < .05$.

Table 7

Intercorrelations for ADHD and Control Group Children's General Self-Esteem as Measured by the SDQ-I and Parental Empathy Predictor Variables (N = 80)

Variable	1	2	3
SDQ-I General Self Scale Score	-.07	-.25*	.06
Predictor Variables			
1. AAPI-2 Inappropriate Expectations Score	-		
2. Child PARQ Total Rejection Score	-.32*	-	
3. PCIA Positive Parent Responsiveness Score	.15	-.26*	-

* $p < .05$.

Table 8

Regression Analysis Summary for Parental Empathy Variables Predicting ADHD and Control Group Children's General Self-Esteem as Measured by the SDQ-I

Variable	<i>B</i>	<i>SEB</i>	β	<i>t</i>	sr^2
AAPI-2 Inappropriate Expectations Score	.40	.28	.17	1.44	.025
Child PARQ Total Rejection Score	-.12	.05	-.30	-2.56*	.078
PCIA Positive Parent Responsiveness Score	1.63	.22	.01	.07	<.001

Note. $Adj.R^2 = .052$ ($N = 80$, $p = .069$). sr^2 = squared semipartial correlation.

* $p = .01$.

Table 9

Intercorrelations for Children's Parent Relations Self-Esteem as Measured by the SDQ-I, and ADHD Group Status and Parental Empathy Predictor Variables (N = 80)

Variable	1	2	3	4
SDQ-I Parent Relations Scale Score	.08	.09	-.41**	.14
Predictor Variables				
1. ADHD Group Status	-			
2. AAPI-2 Inappropriate Expectations Score	-.12	-		
3. Child PARQ Total Rejection Score	-.10	-.32**	-	
4. PCIA Positive Parent Responsiveness Score	.04	.15	-.26*	-

* $p < .05$, ** $p < .01$.

Table 10

Hierarchical Regression Analysis Summary for ADHD Group Status and Parental Empathy Variables Predicting Children's Parent Relations Self-Esteem as Measured by the SDQ-I

Variable	<i>B</i>	<i>SEB</i>	β	<i>t</i>	sr^2
Step 1					
ADHD Group Status	1.51	2.28	.08	.66	.006
Step 2					
ADHD Group Status	.50	2.17	.03	.23	<.001
AAPI-2 Inappropriate Expectations Score	.13	.31	.05	.44	.002
Child PARQ Total Rejection Score	-.19	.05	-.41	-3.57*	.141
PCIA Positive Parent Responsiveness Score	7.45	.24	.03	.31	.001

Note. Step 1 $Adj.R^2 = -.007$ ($N = 80$, $p = .511$), Step 2 $Adj.R^2 = .125$ ($p = .007$).

sr^2 = squared semipartial correlation.

* $p < .01$

Table 11

Intercorrelations for ADHD Children's Peer Acceptance as Measured by the LSDQ and Parental Empathy Predictor Variables (n = 49)

Variable	1	2	3
LSDQ Total Score	-.04	-.09	.28*
Predictor Variables			
1. AAPI-2 Inappropriate Expectations Score	-		
2. Child PARQ Total Rejection Score	-.32*	-	
3. PCIA Positive Parent Responsiveness Score	.02	-.21	-

* $p < .05$.

Table 12

*Regression Analysis Summary for Parental Empathy Variables Predicting ADHD**Children's Peer Acceptance as Measured by the LSDQ Total Score*

Variable	<i>B</i>	<i>SEB</i>	β	t^\dagger	sr^2
AAPI-2 Inappropriate Expectations Score	-.11	.27	-.06	-.42	.004
Child PARQ Total Rejection Score	-1.61	.05	-.05	-.33	.002
PCIA Positive Parent Responsiveness Score	.38	.21	.27	1.82	.067

Note. $Adj.R^2 = .019$ ($n = 49$, $p = .281$). sr^2 = squared semipartial correlation.

$^\dagger p$ values are not significant.

Table 13

Intercorrelations for ADHD Children's Peer Acceptance as Measured by the TRS and Parental Empathy Predictor Variables (n = 49)

Variable	1	2	3
TRS Social Acceptance Score	.003	-.10	.12
Predictor Variables			
1. AAPI-2 Inappropriate Expectations Score	-		
2. Child PARQ Total Rejection Score	-.37*	-	
3. PCIA Positive Parent Responsiveness Score	.04	.03	-

* $p < .05$.

Table 14

Regression Analysis Summary for Parental Empathy Variables Predicting ADHD

Children's Peer Acceptance as Measured by the TRS

Variable	<i>B</i>	<i>SEB</i>	β	t^\dagger	sr^2
AAPI-2 Inappropriate Expectations Score	-3.01	.13	-.05	-.24	.002
Child PARQ Total Rejection Score	-1.21	.02	-.12	-.61	.013
PCIA Positive Parent Responsiveness Score	6.15	.09	.13	.70	.017

Note. $Adj.R^2 = -.076$ ($n = 49$, $p = .845$). sr^2 = squared semipartial correlation.

$^\dagger p$ values are not significant.

Table 15

Intercorrelations for ADHD Children's Compliance as Measured by the PCIA and Parental Empathy Predictor Variables (n = 43)

Variable	1	2	3
PCIA Child Compliance Score	.02	.04	.01
Predictor Variables			
1. AAPI-2 Inappropriate Expectations Score	-		
2. Child PARQ Total Rejection Score	-.30*	-	
3. PCIA Positive Parent Responsiveness Score	.15	-.24	-

* $p < .05$.

Table 16

*Regression Analysis Summary for Parental Empathy Variables Predicting ADHD**Children's Compliance as Measured by the PCIA*

Variable	<i>B</i>	<i>SEB</i>	β	t^\dagger	sr^2
AAPI-2 Inappropriate Expectations Score	2.47	.01	.03	.18	<.001
Child PARQ Total Rejection Score	7.65	.002	.05	.32	.003
PCIA Positive Parent Responsiveness Score	1.38	.01	.02	.12	<.001

Note. $Adj.R^2 = -.074$ ($n = 43$, $p = .990$). sr^2 = squared semipartial correlation.

$^\dagger p$ values are not significant.

Table 17

Intercorrelations for ADHD Children's Aggression as Measured by the CBCL and Parental Empathy Predictor Variables (n = 47)

Variable	1	2	3
CBCL Aggression Scale Score	-.21	-.07	-.33*
Predictor Variables			
1. AAPI-2 Inappropriate Expectations Score	-		
2. Child PARQ Total Rejection Score	-.32*	-	
3. PCIA Positive Parent Responsiveness Score	-.01	-.20	-

* $p < .05$.

Table 18

*Regression Analysis Summary for Parental Empathy Variables Predicting ADHD**Children's Aggression as Measured by the CBCL*

Variable	<i>B</i>	<i>SEB</i>	β	<i>t</i>	sr^2
AAPI-2 Inappropriate Expectations Score	-.83	.41	-.29	-2.02*	.003
Child PARQ Total Rejection Score	-.13	.08	-.24	-1.64	.012
PCIA Positive Parent Responsiveness Score	-.85	.31	-.38	-2.74**	<.001

Note. $Adj.R^2 = .148$ ($n = 47$, $p = .019$). sr^2 = squared semipartial correlation.

* $p = .05$, ** $p < .01$.

Table 19

Intercorrelations for ADHD Children's Aggression as Measured by the PCIA and Parental Empathy Predictor Variables (n = 49)

Variable	1	2	3
PCIA Child Aggression Score	-.09	.06	-.08
Predictor Variables			
1. AAPI-2 Inappropriate Expectations Score	-		
2. Child PARQ Total Rejection Score	-.32*	-	
3. PCIA Positive Parent Responsiveness Score	.02	-.21	-

* $p < .05$.

Table 20

*Regression Analysis Summary for Parental Empathy Variables Predicting ADHD**Children's Aggression as Measured by the PCIA*

Variable	<i>B</i>	<i>SEB</i>	β	t^\dagger	sr^2
AAPI-2 Inappropriate Expectations Score	-4.49	.09	-.08	-.50	.005
Child PARQ Total Rejection Score	2.04	.02	.02	.13	<.001
PCIA Positive Parent Responsiveness Score	-3.27	.07	-.07	-.47	.005

Note. $Adj.R^2 = -.052$ ($n = 49$, $p = .893$). sr^2 = squared semipartial correlation.

$^\dagger p$ values are not significant.

Table 21

Intercorrelations for Children's Aggression as Measured by the PCIA, and ADHD Group Status and Parental Empathy Predictor Variables (N = 79)

Variable	1	2	3	4
PCIA Child Aggression Score	-.27*	-.06	.07	-.13
Predictor Variables				
1. ADHD Group Status	-			
2. AAPI-2 Inappropriate Expectations Score	-.09	-		
3. Child PARQ Total Rejection Score	-.08	-.39*	-	
4. PCIA Positive Parent Responsiveness Score	.06	.11	-.29*	-

* $p < .01$.

Table 22

Hierarchical Regression Analysis Summary for ADHD Group Status and Parental Empathy Variables Predicting Children's Aggression as Measured by the PCIA

Variable	<i>B</i>	<i>SEB</i>	β	<i>t</i>	sr^2
Step 1					
ADHD Group Status	-1.11	.45	-.27	-2.46*	.073
Step 2					
ADHD Group Status	-1.11	.46	-.27	-2.41*	.071
AAPI-2 Inappropriate Expectations Score	-4.17	.07	-.07	-.60	.004
Child PARQ Total Rejection Score	-7.61	.01	-.01	-.07	<.001
PCIA Positive Parent Responsiveness Score	-4.67	.05	-.11	-.91	.010

Note. Step 1 $Adj.R^2 = .061$ ($N = 79$, $p = .016$), Step 2 $Adj.R^2 = .041$ ($p = .131$).

sr^2 = squared semipartial correlation.

* $p < .05$

Table 23

Mean Scores and Standard Deviations for Measures of Child Adjustment as a Function of ADHD Group Status and Parental Empathy Level

Group	Measures of Child Adjustment							
	SDQ-I General Self Score		LSDQ Total Score		Compliance Score		Aggression Score	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
ADHD Group Status								
ADHD	48.49	10.61	39.62	6.43	.47	.29	2.01	1.81
Control	48.56	8.52	40.28	6.51	.50	.30	1.23	1.54
Parental Empathy Level								
Low	47.72	9.80	38.33	7.05	.46	.31	2.34	1.99
High	49.33	9.82	41.47	5.36	.50	.28	1.19	1.31

Note. Compliance score = ratio of number of child compliance responses to number of parental commands during the PCIA task. Aggression score = mean of child's aggression toward self and others during the PCIA task. Parental empathy = mean of z scores of AAPI-2 Inappropriate Expectations score, Child PARQ Total Rejection score, and PCIA Positive Parent Responsiveness score.

Table 24

Multivariate and Univariate Analyses of Variance F Ratios for ADHD Status X Parental Empathy (PE) Level for Measures of Child Self-Esteem (SDQ-I) and Peer Acceptance (LSDQ) (N = 91)

	MANOVA	ANOVA	
		SDQ-I General Self-Esteem Score	LSDQ Total Score
Variable	<i>F</i> (2, 86)	<i>F</i> (1, 87)	<i>F</i> (1, 87)
ADHD Status	.11	.001	.21
PE Level	2.49	.80	4.77*
ADHD Status X PE Level	.45	.39	.39

Note. *F* ratios were generated from Wilk's Lambda statistic. MANOVA = multivariate analysis of variance; ANOVA = univariate analysis of variance. PE = mean of z scores of AAPI-2 Inappropriate Expectations score, Child PARQ Total Rejection score, and PCIA Positive Parent Responsiveness score.

* $p < .05$.

Table 25

Multivariate and Univariate Analyses of Variance F Ratios for ADHD Status X Parental Empathy (PE) Level for Measures of Child Compliance and Aggression (N = 74)

	MANOVA	ANOVA	
		PCIA Child Compliance Score	PCIA Child Aggression Score
Variable	<i>F</i> (2, 69)	<i>F</i> (1, 70)	<i>F</i> (1, 70)
ADHD Status	1.97	.10	3.71 [†]
PE Level	3.47	.45	6.82*
ADHD Status x PE Level	.77	.20	.76

Note. *F* ratios were generated from Wilk's Lambda statistic. MANOVA = multivariate analysis of variance; ANOVA = univariate analysis of variance. PE = mean of z scores of AAPI-2 Inappropriate Expectations score, Child PARQ Total Rejection score, and PCIA Positive Parent Responsiveness score.

**p* = .01, [†]*p* = .06.

APPENDIX B

Model of Stress in Parent-Child Interactions

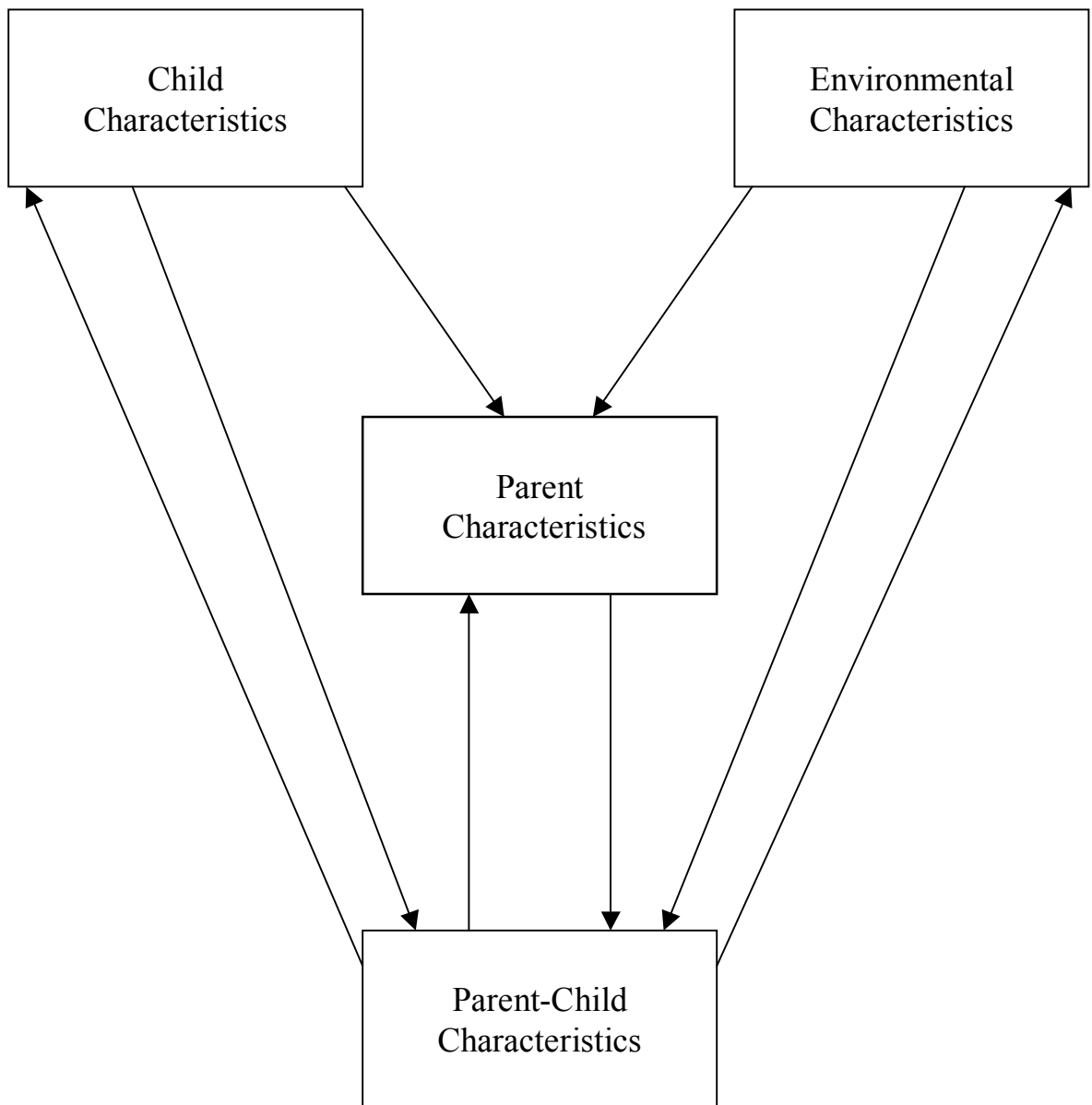


Figure 1. A model of stress in parent-child interactions (from Mash & Johnston, 1990)

APPENDIX C

Demographic Information and History Form

DYAD # _____

Today's Date _____

DEMOGRAPHIC INFORMATION AND HISTORY FORM

1. The parent (or guardian) who is filling out this questionnaire and participating with a child is the child's (please check one box):

(1) ☐ mother (2) ☐ father (3) ☐ stepmother

(4) ☐ stepfather (5) ☐ foster mother (6) ☐ foster father

(7) ☐ grandmother (8) ☐ grandfather

(9) ☐ other please specify: _____

2. Other guardians who live with you and this child are (check "yes" or "no" for each person):

(1)Yes (2)No

(1)Yes (2)No

a. mother ☐ ☐

b. father ☐ ☐

c. stepmother ☐ ☐

d. stepfather ☐ ☐

e. foster mother ☐ ☐

f. foster father ☐ ☐

g. grandmother ☐ ☐

h. grandfather ☐ ☐

i. other (please specify): _____

3. Other parents who see this child every month or more but DO NOT live with you are (check "yes" or "no" for each person):

(1)Yes (2)No

(1)Yes (2)No

a. mother ☐ ☐

b. father ☐ ☐

c. stepmother ☐ ☐

d. stepfather ☐ ☐

e. other (please specify): _____

4. How many other children live in your household? (circle one)

0 1 2 3 4 5 6 7 8 9 10 or more

5. How many adults besides yourself regularly help you care for the child(ren)?
[Do not include paid baby-sitters or daycare workers] (circle one)

0 1 2 3 4 or more

6. The participating child is a: (1) ☐ girl (2) ☐ boy

7. Have there been any months in this child's life when you did not live in the same house?

(1) ☐ Yes (2) ☐ No

If yes, please list age of child at separation from you, length of separation, amount of contact you did have with the child (if any) and the reason for separation:

Age of Child Length of Separation Contact? Reason for Separation _____

8. Currently, about how many hours per day do you spend with this child (do not count time when child is asleep at night, but do count child's naptime if you are home with them). If it changes from day to day, figure an average:

(1) ☐ 1- 2 hours (2) ☐ 3 – 4 hours (3) ☐ 5 – 6 hours (4) ☐ 7 – 8 hours

(5) ☐ 9- 10 hours (6) ☐ 11 or more hours

9. Your date of birth: _____ 10. Your child's date of birth: _____

11. Your age today: _____ 12. Your child's age today: _____

13. Your child's grade in school (if completing during the summer, choose the grade that your child will enter next Fall):

(1) ☐ Not in school (2) ☐ pre-school (3) ☐ kindergarten

(4) ☐ 1st grade (5) ☐ 2nd grade (6) ☐ 3rd grade (7) ☐ 4th grade (8) ☐ 5th grade

(9) ☐ Other (please explain): _____

14. How would you describe your ethnic-racial background?

(1) ☐ Asian-American (2) ☐ Black (African-American) (3) ☐ Caucasian (White)

(4) ☐ Hispanic (5) ☐ Middle Eastern (Arab) (6) ☐ Native American Indian

(7) ☐ Biracial (please specify _____)

(8) ☐ Other (please specify _____)

15. Is English your first language? (1) ☐ Yes (2) ☐ No (please specify _____)

16. How would you describe your child's ethnic-racial background?

(1) ☐ Asian-American (2) ☐ Black (African-American) (3) ☐ Caucasian (White)

(4) ☐ Hispanic (5) ☐ Middle Eastern (Arab) (6) ☐ Native American Indian

(7) ☐ Biracial (please specify _____)

(8) ☐ Other (please specify _____)

17. Is English your child's first language? (1) ☐ Yes (2) ☐ No (specify _____)

18. List the country in which the following people were born. (If they have moved from their birth country to the US, how many years have they lived in this country?)

	<u>Country of Birth</u>	<u>Number of Years in USA</u>
a. Child	_____	_____
b. Child's Mother	_____	_____
c. Child's Father	_____	_____
d. Child's Maternal Grandmother (Mother's Mother)	_____	_____
e. Child's Maternal Grandfather (Mother's Father)	_____	_____
f. Child's Paternal Grandmother (Father's Mother)	_____	_____
g. Child's Paternal Grandfather (Father's Father)	_____	_____

19. Which category best describes your current marital status?

(1) ☐ never married (2) ☐ married (3) ☐ separated

(4) ☐ divorced (5) ☐ widowed (6) ☐ separated

(7) ☐ other (explain _____)

20. Which category best describes your current relationship status?

(1) ☐ single, not dating (2) ☐ single, but dating casually

(3) ☐ single, but dating seriously (4) ☐ living together/engaged

(5) ☐ married (6) ☐ separated

(7) ☐ other (please explain _____)

21. How long have you been in your current relationship?

(1) ☐ I'm not in a relationship (2) ☐ 3 months or less (3) ☐ 3- 9 months

(4) ☐ about 1 year (5) ☐ about 2 years (6) ☐ 3-4 years

(7) ☐ 5 years or more

22. What is the highest degree you've earned or the last grade in school you completed?

(1) ☐ 8th grade (2) ☐ 9th grade (3) ☐ 10th grade (4) ☐ 11th grade

(5) ☐ 12th grade (H.S. diploma or GED) (6) ☐ technical/trade school diploma

(7) ☐ community college degree (8) ☐ university degree, specify _____

(9) ☐ advanced degree, specify _____

(10) ☐ other, please specify _____

23. Are you currently a student? (1) ☐ Yes, part-time (2) ☐ Yes, full-time (3) ☐ No

24. Are you currently employed? (1) ☐ Yes, part-time (2) ☐ Yes, full-time (3) ☐ No

25. If yes, what is your job? _____

IN THIS SECTION, PLEASE ANSWER FOR THE CHILD'S OTHER PRIMARY PARENT (OR GUARDIAN), IF THEY HAVE ONE. Choose the person with whom the child lives at least some of the time (for example, your significant other or, if you are divorced, the child's other biological parent). [If there is more than one person in this category, choose the one with whom the child spends the most time.] If there is no other parent/guardian, skip to #30.

26. What is the highest degree this parent/guardian has earned or the last grade in school they completed?

- (1) ☐ 8th grade (2) ☐ 9th grade (3) ☐ 10th grade (4) ☐ 11th grade
(5) ☐ 12th grade (H.S. diploma or GED) (6) ☐ technical/trade school diploma
(7) ☐ community college degree (8) ☐ university degree, specify _____
(9) ☐ advanced degree, specify _____
(10) ☐ other, please specify _____

27. Are they currently a student? (1) ☐ Yes, part-time (2) ☐ Yes, full-time (3) ☐ No

28. Are they currently employed? (1) ☐ Yes, part-time (2) ☐ Yes, full-time (3) ☐ No

29. If yes, what is their job? _____

30. What is your approximate yearly household income before taxes (include child support received, if that applies to you)?

- (1) ☐ less than 10,000 (2) ☐ 10,000 – 20,000 (3) ☐ 20,000 – 30,000
(4) ☐ 30,000 – 40,000 (5) ☐ 40,000 – 50,000 (6) ☐ 50,000 – 60,000
(7) ☐ 60,000 – 70,000 (8) ☐ 70,000 – 100,000 (9) ☐ over 100,000

31. Have you ever taken parenting classes? (1) ☐ Yes (2) ☐ No

If yes, please describe the type of classes you had and for how long:

Description of Parenting Classes

Number of Classes (or time span)

32. Have you ever attended counseling? (1) ☐ Yes (2) ☐ No

If yes, please describe the type of counseling you had and for how long:

Description of Counseling

Number of Sessions (or time span)

33. Has the child who is participating in this study ever attended counseling?

(1) ☐ Yes (2) ☐ No

If yes, please describe the type of counseling he or she had and for how long:

Description of Counseling

Number of Sessions (or time span)

34. Has this child ever repeated a grade? (1) ☐ Yes (2) ☐ No

35. If yes, which grade? _____

36. Has this child ever skipped a grade? (1) ☐ Yes (2) ☐ No

37. If yes, which grade? _____

38. Does your child receive special education services at school? (1) ☐ Yes (2) ☐ No
 If yes, what is your child's eligibility? (Check all that apply)

- | | (1) <u>Yes</u> | (2) <u>No</u> |
|----------------------------|--------------------------|--------------------------|
| b. Orthopedically Impaired | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Other Health Impaired | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Auditorially Impaired | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Visually Impaired | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Deaf-Blind | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Mentally Retarded | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Emotionally Disturbed | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Learning Disabled | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Speech Impaired | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Autistic | <input type="checkbox"/> | <input type="checkbox"/> |
| l. Traumatic Brain Injury | <input type="checkbox"/> | <input type="checkbox"/> |

39. If yes, grade your child began receiving special education services _____

40. Is this child currently taking any medication? (1) ☐ Yes (2) ☐ No

41. If yes, please list the name of the medication(s) and dosage(s).

42. Has your child ever been diagnosed with any of the following: (Check all that apply)

- | | (1) <u>Yes</u> | (2) <u>No</u> | (3) <u>Never
diagnosed,
but I
suspect this
child has
this
disorder</u> |
|----------------------------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------|
| a. Attention-Deficit/Hyperactivity Disorder (ADHD) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Oppositional Defiant Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Conduct Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Tourette's Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Separation Anxiety Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Generalized Anxiety Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Major Depressive Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Dysthymic Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Bipolar Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Other (please specify _____) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

43. If you answered "yes" to any disorder listed in Question #42, how old was your child when first diagnosed? _____

44. If you answered "yes" to any disorder listed in Question #42, who was your child first diagnosed by?

- | | |
|----------------------------------------------------|------------------------------|
| School counselor/psychologist (LSSP, Ph.D.) | (1) <input type="checkbox"/> |
| Other counselor/psychologist (M.S., Ph.D., Psy.D.) | (2) <input type="checkbox"/> |
| Psychiatrist (M.D.) | (3) <input type="checkbox"/> |
| Family physician/general practitioner (M.D.) | (4) <input type="checkbox"/> |
| Other (please specify _____) | (5) <input type="checkbox"/> |

45. Is your child currently receiving counseling for the disorder(s) checked in #42?

- (1) ☐ Yes (2) ☐ No, never (3) ☐ In the past only (4) ☐ Does not apply (no disorder)

46. Which category best describes your religious preference?

- | | | |
|-------------|------------------------------|----------------------------|
| Agnostic | (1) <input type="checkbox"/> | |
| Atheist | (2) <input type="checkbox"/> | |
| Buddhism | (3) <input type="checkbox"/> | |
| Catholicism | (4) <input type="checkbox"/> | |
| Hindu | (5) <input type="checkbox"/> | |
| Judaism | (6) <input type="checkbox"/> | |
| Muslim | (7) <input type="checkbox"/> | |
| Protestant | (8) <input type="checkbox"/> | Specify Denomination _____ |
| Other | (9) <input type="checkbox"/> | Specify _____ |

47. How often do you attend religious services?

- | | |
|----------------------------------|------------------------------|
| More than once per week | (1) <input type="checkbox"/> |
| About once per week | (2) <input type="checkbox"/> |
| About once per month | (3) <input type="checkbox"/> |
| About once or twice per year | (4) <input type="checkbox"/> |
| Seldom (less than once per year) | (5) <input type="checkbox"/> |
| Never | (6) <input type="checkbox"/> |

48. Have you ever been diagnosed with any of the following: (Check all that apply)

	(1) <u>Yes</u>	(2) <u>No</u>	(3) <u>Never diagnosed, but I suspect I have this disorder</u>
a. Attention-Deficit/Hyperactivity Disorder (ADHD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Personality Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substance Abuse or Dependence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Generalized Anxiety Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Major Depressive Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Dysthymic Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Bipolar Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Other (please specify _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

49. If you answered “yes” to any disorder listed in Question #48, are you currently taking medication(s) for the disorders?

(1) ☐ Yes (specify _____)

(2) ☐ No (3) ☐ Does not apply (no disorder)

50. Has the participating child’s other biological parent ever been diagnosed with any of the following: (Check all that apply)

	(1) <u>Yes</u>	(2) <u>No</u>	(3) <u>He/she has never been diagnosed, but I suspect they have this disorder</u>	(4) <u>I don’t know</u>
a. Attention-Deficit/Hyperactivity Disorder (ADHD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Personality Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substance Abuse or Dependence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Generalized Anxiety Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Major Depressive Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Dysthymic Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Bipolar Disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Other (please specify _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX D

Flyer

PARENTS & CHILDREN

NEEDED FOR A STUDY TO HELP CHILDREN WITH ATTENTION PROBLEMS

A research team at the **University of North Texas** needs parents and kids to help with a study of parent-child interaction.

All parents with children ages 4-10 are needed. We especially need children **ages 7 to 10** who have been diagnosed with Attention-Deficit/Hyperactivity Disorder (**ADHD or ADD**).

Your participation is for a good cause, to help develop more effective treatments for children with attention problems.

For your time and participation, you will be paid \$10/hour. If you don't need the money, you can donate it back to our project or use it for a special treat for your child. Scheduling, childcare, and other obstacles can be worked out.

Please call (940) 369-8993 or Metro (817) 267-3731 ext. 8993 or e-mail Shelly (mac0021@unt.edu) for more information or to set up an appointment.

Thank you!!!

This project has been reviewed and approved by the UNT Committee
for the Protection of Human Subjects (940) 565-3940.

APPENDIX E

Consent Form

**UNIVERSITY OF NORTH TEXAS
COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS
RESEARCH CONSENT FORM**

Page 1 of 5

Subject Name: _____ Date: _____

Title of Study: Parent-Child Relationships and Social Functioning in Children with and without
Attention-Deficit/Hyperactivity Disorder (ADHD)

Principal Investigator: Patricia Kaminski, Ph.D.

Co-Investigators: Sarah L. Durrant, M.S., Shelly Warren, M.S., & Corinne Smith, M.S.

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the proposed procedures. It describes the procedures, benefits, risks, and discomforts of the study. It also describes the alternative treatments that are available to you and your right to withdraw from the study at any time. It is important for you to understand that no guarantees or assurances can be made as to the results of the study.

PURPOSE OF THE STUDY AND HOW LONG IT WILL LAST:

The purpose of this study is to observe parent-child interactions and how children function socially. Each parent's involvement will consist of 3 hours. Each child's involvement will be about 2 hours

DESCRIPTION OF THE STUDY INCLUDING THE PROCEDURES TO BE USED:

Parents and children will come to the UNT campus for the study. Each parent-child pair will be videotaped while they play together with a specific set of toys. A research assistant will interrupt the play frequently and suggest a new storyline. After 30 minutes of play, each person will watch a few minutes of the videotape and be asked some questions about it. Then, each parent will answer a set of written questionnaires related to parenting behaviors, attitudes, stressors, parent's and child's psychological symptoms (for example: worrying, hyperactivity, depression, etc.), and the demographics and brief medical history of their family [for example, level of education, marital status, number of children, and current medications (child only)]. While the parent is completing the questionnaires, the child will go to a separate room with a graduate student to complete 3 questionnaires that ask about parent behaviors (for example: "[My mother] tries to help me when I am scared or upset."), and how they feel about themselves in relation to their physical, academic, and social functioning (for example: "Do you have lots of friends at school?"). The graduate student will read each question to the child, and the child will mark his/her responses on the questionnaires. The child will be given play and snack breaks as needed. If the child finishes his/her questionnaires before their parent is done, a research assistant will be available to supervise (and play with) the child. In addition, each parent may choose to complete a letter addressed to the child's teacher asking their help in completing two measures regarding the child's social behavior at school (we will have the 2 surveys available for the parent to review before deciding whether or not to have the child's teacher involved).

Because a primary purpose of this study is the comparison of children with and without attention deficits, children who have ADHD cannot be on their stimulant medication during the

**UNIVERSITY OF NORTH TEXAS
COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS
RESEARCH CONSENT FORM**

Page 2 of 5

Subject Name: _____ Date: _____

Title of Study: Parent-Child Relationships and Social Functioning in Children with and without
Attention-Deficit/Hyperactivity Disorder (ADHD)

Principal Investigator: Patricia Kaminski, Ph.D.

Co-Investigators: Sarah L. Durrant, M.S., Shelly Warren, M.S., & Corinne Smith, M.S.

videotaped play. During the phone contact that set up the appointment, parents were asked to make sure that their child has not taken their latest dose of stimulant medication (e.g., Ritalin, Adderall). Furthermore, parents were asked to bring their child's stimulant medication with them so that the child can take the medication immediately before the videotaped play. Since the medication is not effective for about 30 minutes, we can get the data we need and minimize the time the child needs to be off his/her medication.

Researchers will study the videotapes of over 100 different parent-child pairs. The long-term goal is to better understand the relationship between parents and children and how it relates to children's functioning in school, family, and peer relationships.

**DESCRIPTION OF PROCEDURES/ELEMENTS THAT MAY RESULT IN
DISCOMFORT OR INCONVENIENCE:**

There is a chance that some parent-child pairs will feel uncomfortable during the play exercise when the research assistant suggests a storyline that presents a problem that needs to be solved. An example of this would be: "{Child's Name} wants to look at the tigers and {Mom} wants to look at the hippos. Play out what happens together." Although certain tasks may suggest a disagreement, a researcher will be present at all times to minimize any discomfort that arises. Additionally, at the end of the play exercise, you and your child will have time to talk about your experiences. Any questions that might arise during the play exercise or questionnaire section of the study will be answered by the researcher.

**DESCRIPTION OF THE PROCEDURES/ELEMENTS THAT ARE ASSOCIATED WITH
FORESEEABLE RISKS:**

Only minimal risk of psychological discomfort is associated with participation in this study.

BENEFITS TO THE SUBJECTS OR OTHERS:

By participating in this study, you and your child can benefit by learning more about one another. Also, you will be indirectly benefiting other parents and children because the information gathered by the researchers will help us learn about what makes parents and children get along the best or what can lead to difficulties in the relationship. Further, the results of this study will contribute to the understanding of how parent-child relationships are related to children's functioning at home and school, especially for children with attention deficits. Once we understand these issues, professionals can provide more appropriate services to children with ADHD and those experiencing relationship problems with their parents and their friends. In

**UNIVERSITY OF NORTH TEXAS
COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS
RESEARCH CONSENT FORM**

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Subject Name: _____ Date: _____

Title of Study: Parent-Child Relationships and Social Functioning in Children with and without
Attention-Deficit/Hyperactivity Disorder (ADHD)

Principal Investigator: Patricia Kaminski, Ph.D.

Co-Investigators: Sarah L. Durrant, M.S., Shelly Warren, M.S., & Corinne Smith, M.S.

addition, we will pay you a small amount as a way of thanking you for your time. That amount is \$10 per hour (approximately \$30 total). Finally, we also offer referral information to you when you complete the study in case you or your child would like to speak to a mental health professional about your relationship (or other matters).

CONFIDENTIALITY OF RESEARCH RECORDS:

Your identity and all of your information will be kept private (confidential). Researchers will not mention your last name while the videocamera is recording. All records (questionnaires, videotapes, and our copy of this form) will be kept in a securely locked file cabinet in a locked room in Terrill Hall at UNT. Once all of the measures are completed, your name will not be associated with the videotape or any information you provide. We will assign a random number to all of your records, and that number will be the only identifier. There will only be one list that matches the name and number, and only the primary researchers will have access to that confidential list, which will be kept in a locked file cabinet in a locked room.

REVIEW FOR PROTECTION OF PARTICIPANTS:

This research study has been reviewed and approved by the UNT Committee for the Protection of Human Subjects (940) 565-3940.

RESEARCH SUBJECTS' RIGHTS:

I have read or have had read to me all of the above.

This study has been explained to me via this form and/or via other communication with the investigators. I have been told the risks or discomforts and possible benefits of the study. I have been told of other choices of treatment available to me.

I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw at any time without penalty or loss of benefits to which I am entitled. The study personnel can stop my participation at any time if it appears to be harmful to me, if I fail to follow directions for participation in the study, if it is discovered that I do not meet the study requirements, or if the study is canceled.

In case there are problems or questions, I have been told I can call Patricia Kaminski, Ph.D., Sarah L. Durrant, M.S., Shelly Warren, M.S., or Corinne Smith, M.S. at telephone number (940) 565-2671.

**UNIVERSITY OF NORTH TEXAS
COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS
RESEARCH CONSENT FORM**

Page 4 of 5

Subject Name: _____ Date: _____

Title of Study: Parent-Child Relationships and Social Functioning in Children with and without
Attention-Deficit/Hyperactivity Disorder (ADHD)

Principal Investigator: Patricia Kaminski, Ph.D.

Co-Investigators: Sarah L. Durrant, M.S., Shelly Warren, M.S., & Corinne Smith, M.S.

I understand my rights as a research subject, and I voluntarily consent to participate in this study.
I understand what the study is about and how and why it is being done. I will receive a signed
copy of this consent form.

Subject's Signature

Date

Signature of Witness

Date

Informed Consent for Videotaping (Choose & initial one statement below):

_____ I give my permission for my child and I to be videotaped and for that videotape to be
shown in
professional settings.

_____ I give my permission for my child and I to be videotaped, but I do not agree to have that
videotape shown to anyone who is not directly involved with Dr. Kaminski's research.

For the Investigator or Designee:

I certify that I have reviewed the contents of this form with the person signing above, who, in my
opinion, understood the explanation. I have explained the known benefits and risks of the
research.

Principal Investigator's or Designee's Signature

Date

**UNIVERSITY OF NORTH TEXAS
COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS
RESEARCH CONSENT FORM**

Page 5 of 5

Subject Name: _____ Date: _____

Title of Study: Parent-Child Relationships and Social Functioning in Children with and without
Attention-Deficit/Hyperactivity Disorder (ADHD)

Principal Investigator: Patricia Kaminski, Ph.D.

Co-Investigators: Sarah L. Durrant, M.S., Shelly Warren, M.S., & Corinne Smith, M.S.

CHILD ASSENT:

If the parent chooses to sign the Informed Consent, they may read the following to their child or have the researcher do so, "[I/Your Mom/Dad] [have/has] just agreed to help today, but [they/we] need your help, too. You can decide whether or not you want to help. What [they/we] need you to do is play with certain toys with [me/your mom/dad] while [they/we] make a movie of [us/you]. [Researcher's name/I] will play with [us/you and your Mom/Dad] and give ideas about what is happening. When we're done making the movie [Researcher's Name/I] will show you some of it and ask you some questions about it. [Researcher's name/I] will help you answer some questions on paper. Would you like to do that?"

Wait for the child response.

If the child verbalizes assent or signals assent by nodding their head, point to the appropriate spot below and say, "OK, thank you. To show that you said 'yes' I need you to write your first name or put an 'X' in this space here."

YES _____

If the child does not verbalize or signal assent or communicates dissent, point to the appropriate spot on below and say, "OK, thank you. To show that you said 'no' I need you to write your first name or put an 'X' here."

NO _____

For the Investigator or Designee:

I have read or observed the reading of the appropriate passages above to the child participant and interpreted his/her wishes to the best of my ability.

Investigator's or Designee's Signature

Date

APPENDIX F

Procedures for Administration of Child Questionnaires

Procedures for Administration of Child Questionnaires

1. During PCIA set-up, the Child Folder should be placed in Room #127, including the following materials:
 - ◆ Adapted Child-Parental Acceptance Rejection/Control Questionnaire (Adapted Child-PARQ/Control) – Be sure the appropriate version is included to match the participating parent (Mother/Father)
 - ◆ Administrator Version of the Adapted Child-Parental Acceptance Rejection/Control Questionnaire (Administrator Version - Adapted Child-PARQ/Control)
 - ◆ Laminated Loneliness and Social Dissatisfaction Questionnaire (LSDQ) Includes questions only.
 - ◆ Administrator Version of the Loneliness and Social Dissatisfaction Questionnaire (LSDQ) Front includes instructions, and back includes questions
 - ◆ Adapted Self Description Questionnaire (SDQ-I)
 - ◆ Administrator Version of Adapted Self Description Questionnaire (SDQ-I) This has a laminated instruction sheet, a sheet with the questions in table format, and 2 scoring sheets
 - ◆ 1 “Child Administration Data” sheet

Other materials include:

- ◆ 2 Markers/Pens/Crayons
 - ◆ 1 Egg Timer (Kitchen Timer)
 - ◆ 1 Stopwatch
 - ◆ 1 Laminated Sheet of Blue Paper
 - ◆ White board markers
 - ◆ Lacrosse game
2. The number on the outside of the Child Folder is the dyad’s assigned number, which should match the numbers on one of each questionnaire and the “Child Administration Data” sheet in the folder and the numbers on the Parent Folder and videotapes. The researcher assigned to complete PCIA set-up should verify that these numbers match.
 3. Following completion of the child inquiry phase of the PCIA, the researcher administering the PCIA will bring the child to Room #181, where the snacks and drinks are set up.
 4. If the researcher administering the PCIA is a graduate student, she will complete the parent inquiry phase of the PCIA while an undergraduate remains in Room #181 with the child. Following parent inquiry, the researcher will then return to Room #181. If the researcher administering the PCIA is an undergraduate student,

the graduate researcher (GRA) will be waiting in Room #181 for the child to arrive.

5. The researcher who greets the child in Room #181 will offer him/her a snack and restroom break. The break should last no more than 10 minutes, or the amount of time for the parent inquiry phase of the PCIA. If the child has not finished his/her snack during that time, the child will be reassured that he/she will have time to finish the snack later.
6. Following the break, the GRA will then say to the child, **“Now it’s time for me to help you answer some questions on paper. We’re going to another room down the hall.”**
7. The GRA will escort the child to Room #127 and leave the door open at all times.
8. The GRA will direct the child to sit next to her at the table. Then, the GRA will say to the child, **“I’m going to read you some questions on three different forms. I will help you mark your answers on the forms. There are no ‘right’ or ‘wrong’ answers to these questions; you should just try to tell me which answer is most like you or your [mom/dad]. I am going to read each question two times. Some questions might be confusing, so it’s okay to ask questions.”**
9. The GRA will write the current time in the first space next to “Admin Time” on the “Child Administration Data” sheet.
10. The GRA will administer the Adapted Child-PARQ/Control, LSDQ, and Adapted SDQ-I in the order specified on the “Child Administration Data” sheet.
11. For each questionnaire administration, the GRA will give one copy of the questionnaire to the child and keep one copy for himself/herself.
12. The GRA will begin each questionnaire administration by reading aloud the directions on the questionnaire and making sure the child understands them before moving on to the questions. If the child does not understand the directions, the GRA will explain them further and ascertain whether the child understood.
13. During the administration of the LSDQ and the Adapted SDQ-I, the GRA will read the questions aloud **twice**, and the child may read along with his/her copy of the questionnaire. On the Adapted Child-PARQ/Control and Adapted SDQ-I, some items have standard rewordings and will be noted on the Administrator Version of the Adapted Child-PARQ/Control. If a standard rewording was developed, then the GRA will first read the original item. Then they will make a statement that says, **“This means...”** and will read the standard rewording. For the items that require no rewording, each item will be read twice for emphasis.

For all questionnaires, the GRA will make sure to have the child's attention before reading the questions.

14. The GRA will help the child follow along with the questions by using the blue laminated sheet of paper to cover up unanswered questions and moving the paper down to reveal each new question as it is read aloud. If the child says he/she can complete the questionnaire without the blue paper to help them follow along, the GRA will say, **"The paper helps me to know where we are."**
15. During each questionnaire administration, on the first four questions, the GRA will ask, **"Do you understand what that means?"** before obtaining a response. During the remainder of the administration, the GRA will periodically ask the child if he/she understood the questions.
16. The GRA will request an answer from the child as specified by the directions on the particular questionnaire.
17. On the Adapted Child-PARQ/Control and Adapted SDQ-I, the child may mark his/her response on the questionnaire, or the GRA may mark the child's verbal responses, depending on the child's preference. On the Adapted SDQ-I and the LSDQ, the GRA will mark the child's responses on the Administrator Versions of the questionnaires according to the rating scale at the top of the page (Note that for the Adapted SDQ-I, the administrator will mark the child's responses on the administrator form, regardless of whether the child marks his/her responses on the questionnaire.) The GRA will make sure the responses are written clearly and recorded on the questionnaire with the dyad's number on it.
18. If the child chooses to mark his/her responses on the Adapted Child-PARQ/Control, the GRA will make sure the child marks the answer space that corresponds with the question.
19. If the child does not understand the question, the GRA will explain the question further, ascertain whether the child understands the question, reread the question, and request a response. Explanations should help define the items in a neutral way, without implying that any particular answer is more right or "better." If the child appears anxious or is looking for approval for a particular answer, remind him/her that there are no "right" answers.
20. The GRA will record the number of the question(s) that the child does not understand and child's verbalizations about his/her difficulty understanding the particular question(s) on the "Child Administration Data" sheet.
21. If the child does not respond to a question following further explanation, the GRA will circle the item and reread the question after the administration of remaining

items. If the child still does not respond appropriately, the GRA will ask whether he/she understands the question. If the child does not understand the question, the GRA will further clarify the question and request a response. Make sure such difficulty with an item is recorded on the “Child Administration Data” sheet.

22. The GRA will make sure not to reinforce or make evaluative comments on any responses verbally or nonverbally. However, the GRA will provide encouragement for the child’s hard work and attentiveness.
23. If the child comments on the similarity between questions on the various questionnaires (e.g., “I already answered that question.”), the GRA will state, **“Some questions ask about the same kinds of things. Just answer the best you can.”**
24. If at any time during administration the child requests a restroom break, the GRA will stop administration and escort him/her to the restroom.
25. If at any time during administration, the child becomes fidgety or requests a break, the GRA will allow the child to take a break for no more than 5 minutes. The GRA will write the time in the space next to “Break Time” on the “Child Administration Data” sheet for each time the child takes a break. The GRA will set the egg timer for five minutes so that the child can see the time limit.
26. Twenty minutes after the first “Admin Time” or the end of the last break (whichever is later), the GRA will say to the child, **“Now it’s time to take a break for 5 minutes. When this timer goes off, it will be time to finish the questions.”** The GRA will write the time in the space next to “Break Time” on the “Child Administration Data” sheet, and set the egg timer for five minutes so that the child can see the time limit.
27. During the break, the GRA will offer the child a restroom break and then offer the child 2 play options: Tic Tac Toe or a lacrosse game. When the timer rings after 5 minutes, the GRA will say to the child, **“Now it’s time to finish the questions. We can play more later.”**
28. Administration will resume according to directions specified above. The break sequence will be repeated every 20 minutes, until the questionnaires are completed. All break times should be noted on the “Child Administration Data” sheet. Children requesting more frequent breaks should be encouraged to stay on task longer, and the GRA can use the egg timer so the child will know when it is time for their next break.

29. Once all questionnaires are completed, the GRA will write the time in the last space next to “Admin Time” on the “Child Administration Data” sheet, and place all materials in the Child Packet.
30. The GRA will say to the child, **“Thank you for working so hard today. Your answers will help us to help kids who are having different kinds of problems.”** The GRA will give the child the option of having 5 more minutes of play in Room #127 or going directly to the playroom in Room #180.
31. The GRA will escort the child to Room #180, where the toys are set up. The GRA or another researcher will play with the child until his/her mother completes the Parent Folder. The GRA should be sure to have at least 5 more minutes of play with the child, since that was promised.
32. After the debriefing form has been reviewed and the dyad has been escorted to the exit, the GRA will place the Child Folder with the Parent Folder in the “PCIA-Day Data to be Entered” file in the 2nd file drawer in Room #252.

Dyad# _____

Child Administration Data

Order of Administration:

_____ SDQ-I

_____ LSDQ

_____ Child-PARQ

The child should take a 5-minute break every 20 minutes. All breaks should be noted in the spaces as necessary.

Administration Times:

Admin Time _____ to _____

Break 1 Time _____ to _____

Admin Time _____ to _____

Break 2 Time _____ to _____

Admin Time _____ to _____

Break 3 Time _____ to _____

Admin Time _____ to _____

Break 4 Time _____ to _____

Admin Time _____ to _____

Break 5 Time _____ to _____

Admin Time _____ to _____

Child Comments/Questions:

Please write all of the child's comments and questions. Be sure to include the name of the questionnaire and numbers of the questions on which the child experiences difficulty.
(E.g., SDQ; Question #51: Child: "What does popular mean?" GRA: "Liked by kids.")

APPENDIX G

Letter to Teacher

Letter to Teacher

Dear Mr./Ms. _____,
(Teacher's Name)

My son/daughter, _____, and I, _____,
(Child's Name) (Parent's Name)

have participated in a research project at the University of North Texas looking at parent-child relationships.* Your help is greatly needed. Please complete the following two forms (ADHD-IV-Rating Scale: School Version and the Teacher Rating Scale) with regard to my child. It will only take 10 to 20 minutes of your time. As you'll see on the top of each form, my child's anonymity is protected in that a code number has been assigned; please do not write his/her name on the forms.

Please return the forms to the researcher as soon as possible, using the enclosed stamped envelope. Upon receipt of the forms, the researchers will send you \$5 as compensation for your time and effort.

Thank you so much for your help.

Sincerely,

Parent's signature

Date

* This study has been reviewed and approved by the UNT Committee for the Protection of Human Subjects 940-565-3940.

APPENDIX H

PCIA-Day Administration Instructions

PCIA-Day Administration Instructions

1. Arrive at least 1 hour prior to your first dyad (more time is suggested on your very first day). You may store your personal items in the research offices (#252 or 251).
2. Unlock rooms #180, 165, 163, 185, 186, 187, & 127.
3. Get supplies from room #252 and put equipment in its proper room (see #4 below)
4. Room uses:
 - 180 = Playroom & Refreshment room. Set-up toys and activities. Set out snacks, juice, napkins, cups, etc. Never put out a sharp knife. Keep phone from Room 252 with you in case parents call to cancel or get directions.
 - 165 = PCIA & Inquiry room. Move original furniture and arrange 4 chairs around table (see Room 165 Set-up Diagram for specifics). Set out zoo board, PCIA toys (see PCIA Administration Instructions for specifics), materials in plastic box (flipcard, cheatsheet, stopwatch, microphones), tripod (use marked lines for height), video camera, 2 labeled videotapes, and TV/VCR unit & remote control.
 - 163 = Storage room. Store camera case, extra clipboard, paperwork & blank videotapes for other dyads, etc.
 - 185, 186 & 187 = Medication Reminder/Parent Work rooms. Make these rooms as comfortable and presentable as possible (by moving furniture, clearing the table, picking up any trash). Turn the light(s) on and put the parents' PCIA-Day Survey Packet file folder, dictionary, and 2 pens on the table. Make sure there is a jug of water and cups in each room in case the child needs to take medication.
 - 127 = Child Administration room. Put the child packet file folder, 2 pens, kitchen timer, and lacrosse game on the table.
5. Put on name tag, which should be kept in your box in room #252.
6. The phone from room #252 should be kept with a researcher at all times in case a dyad calls to cancel or get directions.

7. PCIA-Day Roles:

<u>Major Duties</u>		<u>RA Classification</u>
A	Medication Reminder (Informed consent, Child assent, Obtain diagnostic status/ Instruct to take stimulant medication)	URA ONLY
B	PCIA Administration	GRA or URA
C	Administration of Child Questionnaires	GRA ONLY
D	Child Care	GRA or URA
E	Post-Administration Session (Teacher packet, Debriefing, Complete receipt, Payment)	GRA ONLY

For further description of PCIA schedule assignments, please see PCIA Schedule Assignments – UNT/Plano Location Sheet, which outlines each duty within a time schedule.

8. Duty B: Your clipboard should have:

- (1) PCIA Administration Instructions
- (2) Inquiry Log
- (3) Teacher Packet (make sure it contains the following:
- (4) Letter to teacher, Stamped envelope with UNT address on it, Request for payment slip, Teacher Rating Scale, ADHD Rating Scale-IV: School Version. Make sure each form has the dyad number in the right corner.)
A Debriefing Form
- (5) Expert Rater Sheet (for graduate RA's only)
- (6) Money Envelope
- (7) A pen

NOTE: All the numbers where Dr. Kaminski can be reached are written in permanent marker on the clipboards. (You'll need to use the phone in #252).

9. Duty A: The automatic Clinic doors do not operate on the weekends. Please wait for the participants and open the door for them (lock it behind you). Also, make sure to get back there 10-15 minutes before the next dyad is expected—even if you need to bring the child you're watching with you).

10. Duty A: Greet the dyad/family and introduce yourself to everyone. Pay attention to all names because you're likely to have to introduce everyone to your fellow researchers.

11. Duty A: Make small talk as you walk them to the Playroom (#180) and drop off non-participating children. The Childcare RA should explain that he/she will be watching the children in Room 180. Ask the parent if there are any special instructions (e.g.,

food allergies, what would they like you to do if the child needs to use the restroom, etc.).

12. Duty A: UNDERGRADUATE RA'S ONLY: One undergraduate RA will be assigned to be aware of ADHD diagnostic status of the participating child. This RA will take participating parent and child to Room 185, 186, or 187. Make sure to shut the door so other RA's will not overhear the child's diagnostic status.
 1. Hand parent a Consent Form and allow them to read through it and sign it. Ask if they have any questions. Answer any questions.
 2. Ask parent to acquire child assent by reading the child assent form to their child.
 3. Ask parent whether the child has been diagnosed with ADHD. Explain to the parent that you will be the only researcher who knows if the child has been diagnosed with ADHD. Ask the parent not to share this information with any researchers until they meet with the graduate researcher at the end. At that time, the parent will have an opportunity to ask the graduate researcher any questions related to ADHD. Be careful not to share ADHD diagnostic information with other RA's!
 4. For child participants who normally take stimulant medication, double-check that they have not taken any medication *within the past 4 hours* if they are on a short-acting medication (i.e., they take a dose 2 or more times per day) or *that day* if they are on a long-acting medication (i.e., they only take one dose per day). If they forgot to skip or delay a dose of medication (the child is currently medicated), they can proceed with the study, but this alteration in procedure **MUST BE NOTED** by you on the back side of the Demographic Information and History form.
 5. If the child has skipped or delayed their dose of medication, instruct the parent to have the child take their medication now. **BE SURE TO NOTE** this on the back side of the Demographic Information and History form. In other words, something should **ALWAYS** be noted on the back of the demographic form if the child has been diagnosed with ADD/ADHD.
 6. When 1-4 above are completed, let the Administrator RA (Duty B Person) know that the dyad is ready to begin.
13. Duty B: Meanwhile, the Administrator RA should go to #165 and make sure there is a tape in the camera, the camera and microphones are on, everything is set-up properly, and the flipcard is on "FP".
14. Duty B: Administrator RA should escort the dyad to Room #165 and begin the PCIA.
15. Duty B: Remember, whenever there is a parent or child in the room, the camera and mics should be on at all times. So, if they ask about turning off/taking off mics, say something like, "Oh, I'll get those later," or "You're going to need it for the next part, so you can just leave it on."

16. Duty B: When it's time for the Child Inquiry, remove the PCIA board and toys from the table. Escort the parent to Room 185, 186, or 187 to begin the Survey Packet. The child should accompany you to see where his or her parent will be.
17. Duty B: Set-up the TV/VCR for the Inquiry, placing the TV/VCR on the table. Remove the PCIA videotape you just made, put the Inquiry videotape in the camera, and begin recording. Cue the PCIA videotape to the correct scenario, making sure to include the entire "story-stem." Make sure the camera is on! Check the shot, remember, the child has to sit in the parent's seat. Conduct the Child inquiry. Then take the child with you to go get the parent.
18. Duty B: With the parent, escort the child to the Childcare RA in room 180. Tell the parent that the child will have a brief break before working on some questionnaires with the Graduate RA in Room #127. This would be a good time to ask parent any new childcare questions or have parent take child to restroom, if needed.
19. Duty B: Administrator RA should escort the parent back to Room 165. Check that the camera is still on (red light should be on). Conduct Parent Inquiry.
20. Duty B: After completing Parent Inquiry, escort the parent back to Room 185, 186, or 187. Be sure to offer refreshments, and bring the parent whatever he or she would like to eat or drink. Tell them that you or another researcher will check on them in a little while (20-30 minutes) and they should bring their Survey Packet to you (in Room 180) when they are finished.
21. Duty B: If you're done testing for the day, the last Administrator RA should pack up all the PCIA equipment while the other RAs do childcare. If you're expecting another dyad, get everything ready for them (e.g., reset the PCIA toys, put away TV/VCR, put new tape in the camera, etc.). Once these tasks are complete, you may take a break (if there is time and that's OK with your partners).
22. Duty E: When the parent has completed the Survey Packet, he or she will bring it to the Administrator RA in Room 180. The Graduate RA will escort the parent back to Room 185, 186, or 187 and shut the door. Check the parent's packet for completeness. Make sure the date is on the Demographic Information form. If any questions are left blank, ask the parent to complete them. If all questions are completed, put the file folder on your clipboard so it does not get misplaced.
23. Duty E: Explain to the parent about the teacher letter, saying something like: "We would like to have [child's] teacher fill out two forms to help us better understand her/him and what he/she is like at school." Show the parent the two questionnaires (Teacher-Rating Scale & ADHD Rating Scale-IV: School Version). Tell them: "These are the two forms we would like [child's] teacher to complete. You may look

- over the forms if you like. Each form asks questions about [child's] behavior at school." Say: "Do we have your permission to send these forms to [child's] teacher?" If parent says yes: Show them the form letter that begins Dear Mr./Mrs. _____. Say something like, "O.K., please read this letter and sign it at the bottom." Ask the parent the name of the child's teacher and school (and the school address if they know it). Write this information in the address space on the outside of the Teacher Packet. Check that the two questionnaires and the request for payment slip has the dyad # in the top right corner. If parent says no: Say something like, "thank you, please let us know if you change your mind later."
24. Duty E: Fill out a payment receipt in the receipt book (figure the time they spent that day ---remembering that they are not paid for time that they were late). Pay the parent \$10 per hour in 30-minute increments. Place the white copy of the receipt inside the envelope with the extra money (if there is any left over) and clip it to your clipboard. If the dyad earned more than \$35, you can do one of three things (all of which should be noted on the white payment envelope):
- (1) "Borrow" the change from a previous dyad's envelope or from a dyad who cancelled or did not show for their appointment. Make a note of this on both dyads' envelopes.
 - (2) An RA could loan the money to the team. Write a receipt for the full amount that you give the parent, and be sure to make a note on the white envelope as to who Trish owes the money. She will pay you back ASAP.
 - (3) Get a "Request for Payment" slip from room #252 (in top file drawer) and have parent complete it for the amount we owe them. **MAKE SURE THEY PUT THEIR MAILING ADDRESS ON IT**, and tell them we will send them a check ASAP.
25. Duty E: Give the parent the Debriefing Form and tell them that they can take it with them. Summarize it for them and ask them if they have any questions. Give them a few minutes to read it over before they leave, if they choose to do so. At this time, ask the parent if he/she knows any other families who would be interested in participating in the study, and offer flyers if they're interested.
26. Duty E: Thank the parent again and escort them to Room 180 to get their child. Then, escort both the parent and child to the exit. Make sure to lock the door behind them.
27. Duty A, B, C, D, E: All RA's: On the inside cover of the dyad's file folder, record noteworthy child and/or parent behaviors, without using their names.
28. Everyone: Once you've run your last dyad, everything has to be put back to its original place.

- (1) File the Signed Informed Consent form in the appropriate subfile in the blue file marked "Signed Consent Forms (archive)" (see 2nd file drawer in #252).
- (2) Write the child's date of birth (get this from the Demographic Information form) in the provided space on the post-it note on the dyad's videotapes. Put all used videotapes in the second drawer of the desk in #252.
- (3) Remove the Survey Packet Instruction sheet and all laminated and reusable measures and place them in a pile on the table in #252. Put a post-it note on the pile stating "To be filed."
- (4) Put the parent and child file folders in the "Needs to be Entered" file in the 2nd file drawer in #252.
- (5) Put the white money envelope (with the extra money and white payment receipt inside) in the large envelope that is tacked to the bulletin board in #252.
- (6) Put the teacher packet envelope in Margaret's box.
- (7) Put all PCIA toys & equipment back in their proper storage places in #252. (Make sure microphones are turned off!! See equipment checklist.)
- (8) Put all childcare toys back in their proper storage places in #252. If any toys have been borrowed from the playroom, make sure they are returned.
- (9) Put all refreshments & supplies back in their proper storage places in #252.
- (10) Put all furniture back in its original room, in its proper place.
- (11) Clean up any trash, spills, etc. in all the rooms that were used.
- (12) Do one more run through to make sure nothing was left in the rooms. Then, make sure lights are off and doors are locked.
- (13) For Denton location: Mark the white board in room #252 next to each dyad that was scheduled for the day to show whether they completed the PCIA (✓), cancelled the appointment (CX), or did not show for the appointment (NS).
For Plano location: Call the research office at (940) 369-8993 and leave a message regarding the status of each dyad that was scheduled for the day.

29. Make sure main doors are locked and exit via another door that will lock behind you.

30. CONGRATULATE YOURSELF ON A JOB WELL DONE!

APPENDIX I
Debriefing Statement

Debriefing Statement

Dear Research Participant:

Thank you for your participation in our study! Our aim is to learn more about how different parents and children interact, especially when they are in situations with the potential for disagreement. Your participation today will be very beneficial in many research projects. Our results should have uses in many areas, including parenting programs and studying behavior disorders of childhood (such as ADHD).

We hope that making the zoo and solving the “conflicts” was not too stressful for you or your child. Sometimes, however, a certain play story might bring out tension or confusion in real life. You may want to talk with your child about their experiences today. If you or your child have any concerns or would like to talk to someone about today’s activities, your parenting stress, or your child’s behavior, please let the researcher know right now. We can help you get an appointment with a mental health professional. If you have questions after you leave today or would like help with a referral at a later date, call Dr. Trish Kaminski at (940-565-2671).

There are many other places for parents, children, and families to get help in the Metroplex that you can contact on your own. In addition to talking to your child’s school counselor or physician, you can check your local Yellow Pages under “Psychotherapists” or “Psychologists.” For your convenience, the following is a list of the names and phone numbers of several agencies that offer counseling and other services to families. (These agencies are all listed in the Denton County Community Services Directory; for additional information about these or other agencies, call the United Way’s Information & Referral Helpline at 940-566-2688).

Child & Family Resource Clinic (UNT, Denton) offers play therapy and family therapy with fees set according to income level [940-565-2066].

Family Guidance Center (Dallas & Lewisville) offers couples counseling and family therapy with fees set according to income level [214-351-3490].

Family Resource Center (Denton) offers a resource library, parenting classes, & support groups [940-566-1800].

Friends of the Family (Denton) provides shelter and counseling following family violence [800-572-4031].

Marriage & Family Clinic (TWU, Denton) individual, marital & family counseling for all ages with fees set according to income level, but no one is refused service if unable to pay [940-898-2600].

Psychology Clinic (UNT, Denton) individual, marital, group & child assessment & therapy for all ages with fees set according to income level [940-565-2631].

Youth & Family Counseling (Flower Mound) offers counseling programs for youth and their parents with fees set according to income level [972-724-2005].

The results of our study will be available to you in the future. If you would like a copy of our results, please give us your address now or contact us at a later date. You may keep this sheet for your records.

Sincerely,
Dr. Trish Kaminski

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