MOTHERS' AND FATHERS' SELF REPORTS OF MARITAL SATISFACTION AND PERCEPTIONS OF THEIR CHILDREN WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER

by

Catharine Abbitt Hill

A dissertation submitted to the Faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in Family and Child Development

APPROVED:

______________________________
Victoria Fu, Chairman

______ ______________________
Michael J. Sporakowski Howard O. Protinsky

______ ______________________
Joseph W. Maxwell Cheryl V. Tennant

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(ABSTRACT)
This study involved 77 couples consisting of mothers and fathers of ADHD children from intact, two-parent families. All ADHD children were between 6 and 16 years old and had been evaluated by a Licensed Practicing Psychologist or Medical Doctor. All mothers and fathers completed three questionnaires - the Conners Parent Rating Scales-48 (Conners, 1973), the Dyadic Adjustment Scale (Spanier, 1976), and a demographic questionnaire.

For purposes of this study, Bell's (1981) child effects model was used as a basis for research. This model, as opposed to an adult effects model, supports the thesis that children contribute to their own socialization by influencing the behavior of their caretakers. Recent research suggests that in most families of ADHD children, the primary contributors to parent-child interactive stress appear to emanate from child characteristics, with parental and environmental characteristics playing an important but secondary role (Barkley, 1981a, 1989; Bell & Harper, 1977;
Mash & Johnson, 1990; Schachar et al., 1987).

The literature supports the investigation of the relationship between interparent agreement on the perceptions of their ADHD children's behavior and self reports of marital satisfaction with regards to the variables of age of the child, gender of the child, severity of the child's behavior, and gender of the parent. As predicted, moderate relationships were found between interparent agreement on child behavior and mothers' and fathers' reports of marital satisfaction, although somewhat higher for mothers. The predicted effects of age of the child and rated severity of child behavior were not supported. When assessing the effects of gender of the child, parents of ADHD girls reported slightly more agreement and higher marital satisfaction than parents of ADHD boys. Examination of the predicted differences between mothers and fathers showed that mothers perceived their ADHD children's behavior as slightly more severe and reported slightly lower marital satisfaction than did fathers of ADHD children.
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CHAPTER I
Introduction

Children with Attention-deficit Hyperactivity Disorder (ADHD) pose special concerns for their parents and families due to the nature of the symptoms they exhibit. Among these are noncompliance, impulsivity, aggressive behavior, overactivity, depression, attention deficits, and poor social skills (Barkley, 1981a, 1984; Battle & Lacey, 1972). These symptoms occur at an early age and differentiate these children from non-ADHD children (Bryan, 1978; Lambert, 1982; Minde, Lewin, Weiss, Laviqueur, Douglas, & Sykes, 1971; Weiss, Hechtman, & Perlman, 1978).

Consequently, parent-child relationships with these children are often characterized by negative interactions (Battle & Lacey, 1972; Mash & Johnston, 1981) and coercive behaviors (Cunningham & Barkley, 1979). Parents of ADHD children are found to exhibit excessive demands and controlling behaviors (Barkley, 1981a, 1982; Barkley & Cunningham, 1980; Campbell, 1973, 1975; Delameter, Lahey, & Drake, 1981; Webster-Stratton, 1988), suffer low self-esteem (Mash & Johnston, 1983) and low parenting satisfaction (Schaughency & Lahey, 1985; Silver, 1984), depression (Mash & Johnston, 1983), and marital dissatisfaction (Barkley, Fischer, Edelbrock, & Smallish, 1990; Befera & Barkley, 1985; Firestone, 1981).
This description is complicated by research that shows mothers and fathers of ADHD children often differ in their evaluation of their child's behavior (Barkley, 1981a; Stoneman, Brody, & Burke, 1989). Mothers often tend to overestimate their ADHD children's misbehavior, while fathers tend to underestimate such behavior (Barkley, 1981a). This study investigates the nature of these differences in parents' perceptions of their ADHD children's behavior and their influence on the parents' marital satisfaction.

Purpose

The purpose of this study was to investigate the relationship between mothers' and fathers' perceptions of their ADHD children's behavior and their self-reports of marital satisfaction. Moreover, emphasis is on the ADHD children's contributions and influences on the parents' marital relationship.

Clinicians and researchers recognize the dynamic, transactional nature of the parent-child relationship; people who live together usually affect each other. Parents are expected to influence their children. What is often overlooked is the extent to which children influence their parents and other adults. This study was designed to assess the way parents' perceptions and their marital relationships
are influenced by the children they are trying to rear.

Historically, socialization research has concentrated its efforts in showing that most of a child's behavioral characteristics are brought about by the behavior of the parents. It was plausible to conceptualize the parent as the "initial agent of culture and the infant or child as the object of acculturation" (Bell, 1977, p. 53). To one not attuned to a child's effect on the parent in the early years, an infant seems in need of protection and support and then later in need of shaping and modification by the parent.

The human socialization process is much more complex than this traditional conceptualization. What was overlooked in this model was that children are born into the context of families and thus, as part of the environment of parents and adults, must be accepted as sources of stimuli. Consequently, the child is seen as contributing to marital and family relationships not only as an infant, but also when the child reaches middle and late childhood and adolescence. The nature of the parent-child relationship across the life-span is viewed as a dynamic one.

Recent family and psychological research has accepted the dynamic, transactional nature of the parent-child relationship. There is adequate empirical evidence that specifically delineates child effects on parents (Bell, 1968, 1977; Houts, Shutty, & Emery, 1985) and their marital
relationship (Rollins & Galligan, 1978). Studies in the child development literature have shown that certain child characteristics, such as temperament (Campbell, 1979; Lambert, 1982; Rutter, 1978; Thomas & Chess, 1977; Webster-Stratton & Eyberg, 1982), gender (Condry & Condry, 1976), physical appearance (Dion, Berscheid, & Walster, 1972; Harper, 1981), and age (Clark-Stewart & Hevey, 1981; Roberts, Block, & Block, 1984) mediate parental response to a child.

These studies simply illustrate the obvious; by their mere presence children influence the perceptions, emotions, and behavior of their parents. Typical assessment and treatment strategies for problem children have been guided by a bias toward viewing parent-child interactions from the unidirectional causal assumption that only adults influence children (Houts et al., 1985).

The adult effect bias has produced considerable knowledge about how to assess and treat child problems, and one would not advocate abandoning it. Rather, one needs to consider that an alternate bias, the child effect bias, also suggests important clinical approaches.

The present study does not address the effect of the child's mere presence in the family network. Rather, and more important, it is concerned with the child's social relations with his or her parents and how these processes affect the parents' marital satisfaction and the parents'
perceptions of the child. Thus, the child is viewed as influencing the functioning and development of his or her parents and family. Consequently, through feedback received, he or she is an active shaper of his or her development.

In particular, this study explores ways a child with ADHD may influence his or her parents' marital satisfaction. In looking at these special families, this researcher's intent was to reveal more about the special effects of these children on their parents and families. The study will add to the existing body of literature on ADHD children and be of assistance to clinicians, school personnel, and others in helping professions in devising more effective treatment strategies for these families at risk.

Theoretical Rationale

For purposes of this study, Bell's (1981) child effects model was used as a basis for research. This model, as opposed to an adult effects model, supports the thesis that children contribute to their own socialization by influencing the behavior of their caretakers. Thus, children are viewed as active agents who influence their social environments and interactions with adults. Recent research (Barkley, 1987, 1990; Mash & Johnston, 1990) with ADHD children suggests that many of the difficulties these
children and their families face are due primarily to child characteristics.

Prompted by the theoretical work of Bell (1968) and others (Bell & Harper, 1977; Sameroff, 1975), child development researchers have identified many ways in which children do affect adults. They range from the physiological changes experienced by a mother during the course of pregnancy (Harper, 1975) to a child's impact on marital, extended family, and wider social relationships (Belsky, 1981; Lamb, 1978; Rollins & Galligan, 1978). Recent reviewers have emphasized that children contribute to their own development through their impact on adult caregiving behavior (Belsky, 1984; Hetherington & Martin, 1986; Houts et al., 1985).

Among the most salient of children's characteristics that contribute to their impact on adults are age, gender, physical appearance, and temperament. The influence of these variables on adult responses is typically mediated by perceptions and attitudes of adults in general. Adult responses to children of different ages tend to be influenced by child behavior that is determined by maturational factors such as motor, cognitive, and social abilities (Lamb, 1978). In contrast, the influence of gender is most often associated with stereotypic, sex-role expectations for child development (Berman, 1980). Physical appearance, too, has been likened to a social stereotype in
which adults typically respond more positively toward physically attractive children (Berscheid & Walster, 1974). The impact of child temperament on adult responses is mediated by the cognitive set of the adult, or the relative fit between temperament and adult expectations (Thomas & Chess, 1980).

Clearly, there are many ways in which children both cue and reinforce reactions from adults. The infant cry can be seen as a preadaptive mechanism to elicit adult caretaking, and older children's social responsiveness can be viewed as reinforcing positive behavior and attitudes. In contrast, infants described as "difficult" and children who exhibit noncompliant and impulsive behavior tend to elicit negative responses and more controlling behaviors from adults (Turecki & Tonner, 1985). Thus, a negative pattern of interaction is reinforced. It is important, however, to bear in mind that the generalizability of specific child effects is limited by adult individual differences.

Historical Perspectives of the Child

During the medieval period children were seen as miniature adults. Our contemporary concept of childhood simply did not exist. Children were typically dressed like adults; there were few activities unique to children and little time for them to have a "childhood." Mortality rates for children were as high as 60%, and parents simply could
not invest large amounts of emotional currency in children given this fact of life. Suggestions designed to "harden" children for survival - such as immersion in cold water baths - were given and followed (Aries, 1962; Hardyment, 1983; Houts et al., 1985). Moreover, in the labor-intensive economy of feudalism children were expected to carry out adult jobs (Tucker, 1974).

As the feudal order collapsed, changes in economic and political structures resulted in broader distribution of wealth and power. The profession of pediatrics was established, better health care practices were developed, and infant mortality was reduced. At first in wealthier families and then in the rising middle classes, children no longer had to work, and their parents had more leisure time. These changes provided the context for the emergence of childhood as a distinct period of development; the idea that children are passive, dependent recipients of adult influence accompanied this new concept (Houts et al., 1985).

The Child as Passive Recipient

The social and cultural changes of the late seventeenth century were reflected in the conceptualizations of children offered by leading philosophers of the Enlightenment, Rousseau and Locke. Both accorded special significance to the child, and their writings on education laid the foundations for much of the educational policy and child psychology that followed (Robertson, 1974).
For Rousseau, the nativist and romantic, the child was "a noble savage" with innate tendencies toward primativism and irrationalism. Against the dominant views of the church, Rousseau asserted that the child's natural endowment was basically good, though he saw the child as essentially helpless (Houts et al., 1985). An opponent of formal schooling, Rousseau idealized education as creating conditions for a child's natural talents and good qualities to reach their full potential. Although he viewed the child primarily as a passive recipient of adult influences, Rousseau's nativist perspective led him to recognize that children also influence adults (Robertson, 1974).

As Rousseau was reacting to the church, Locke challenged the nativist assumptions implicit in the social order of his era. For Locke, the environmentalist and empiricist, the child was a "tabula rasa," impressionable and malleable. The child's maturation depended on how experience write its marks on the blank slate of innocence and ignorance (Houts et al., 1985).

Locke, like Rousseau, held that parents and society should take special care in designing the child's environment for optimal growth and development. Education and child-rearing practices, particularly in nineteenth-century America, were influenced by Locke's hopeful conceptualization of the child as a passive yet perfectible organism to be shaped by the environment that
adults were responsible for creating (Bakan, 1966). The passage of child labor laws and the massive allocation of resources for public education are salient examples of these developments (Siegel & White, 1982).

Locke also made one of the first declarations of children's rights on the grounds that children were especially weak, passive, and dependent (Houts et al., 1985). Ironically, recent reforms focused on empowering children and spelling out a bill of rights for them (Gross & Gross, 1977) have been based on the assumption that children are "active" agents who should be accorded social and legal status comparable to that of adults (Baumrind, 1978; Melton, 1983).

Thus, what began as an effort to protect the helpless and passive child from arbitrary and unfair social influence of adults has evolved into a movement to empower children and view them as active contributors to social policies and practices that affect them. These broad social changes have paralleled the development of psychological models of childhood that feature children of shapers of their own development (Steinfels, 1982).

The philosophical influence of Locke and Rousseau not only affected lay views on education and child-rearing but also shaped scientific psychological conceptualization and research. This is evident in psychological models of child development and definitions of the child as the dependent
variables in studies of child development.

The dominant psychological models in the early part of the twentieth century feature a passive view of children. This was no less the case in Freud's psychoanalytic paradigm than in Watson's behavioral alternative. Freud's deep commitment to instinct theory led him to view the child as victim of biology. In addition, the model of socialization found in Freud's writings portrayed the child as passive recipient of adult influence (Holzman, 1970; Seeley, 1967).

Although he rejected the Freudian emphasis on instincts, Watson offered a model similarly biased toward adult effects. For Watson, the child was a collection of conditionable responses molded by adults. Watson sought to replace all notions of instincts with habit formations that began in embryonic development. In contrast to the pessimistic conclusions of Freud, Watson cast the child's passivity and ability to be conditioned towards a utopian vision of the perfectibility of children (Houts et al., 1985).

Consistent with the dominant conceptual models, early experimental studies of child development typically defined the child's behavior as the dependent variable while manipulations of adults were designated to be the independent variables. Thus, the linear cause-effect requirements of the laboratory experiment served further to obscure the reciprocity of the relationship between child
and adult (Bronfenbrenner, 1977). Furthermore, the mounting evidence from correlational studies of socialization was interpreted in the framework of unidirectional influences of adults on children despite the tenable reverse causality explanation (Bell, 1968).

In addition to the influence of conceptual models and interpretations of emerging research, the clinical treatment setting itself helped to perpetuate the passive view of the child. Children typically are brought for psychological treatment by adults who believe that the child needs to be changed.

Clearly, the weight of tradition has been on the side of viewing the child as passive recipient of adult influence. However, developments since the middle of the twentieth century have called particular attention to the opposite view.

The Child as Active Agent

Although seeds of the idea that the child is an active agent can be found at the birth of the concept of childhood, the Lockean image of the passive child was altered irreparably by Piaget. His structuralist approach, genetic epistemology, accorded even the very young child an active role in development and maturation.

In describing how knowledge is acquired, Piaget (1970) stated: "To my way of thinking, knowing an object does not
mean copying it - it means acting upon it" (p. 15). Not only did he see the child as radically different from adults in cognitive capabilities, but he emphasized the active child whose biologically programmed cognitive structures altered, shaped, processed, and changed the environment. The child became an agent in the developmental process.

Bell's reanalyses of correlational studies of socialization clearly challenged the passive view of children (Bell, 1968; Bell & Harper, 1977). He argued that naturalistic research correlating parent behavior with child development was misguided by the tacit assumption that parents "cause" children to behave as they do. Instead, he supported the alternative thesis that children contribute to their own socialization by influencing the behavior of the caretakers. In addition, he spelled out experimental research strategies that could isolate parent effects from child effects. Some of these research strategies are now in fairly wide use and have been applied to assess the impact of children on adults in a variety of populations (Bell, 1981).

Research on child temperament has provided empirical support for viewing the child as a functionally if not intentionally active agent who influences the social environment. In their classic prospective study of child temperament, Thomas, Chess, and Birch (1968) showed that "difficult children" tended to develop more behavior
problems later in childhood compared to "easy children." According to these researchers, the child's behavior is shaped not only by genetic predisposition, but also by the effect the child has on others who, in turn, influence the child.

The application of general systems theory to human interactions and the emergence of family therapy is another development that has contributed to viewing the child as an active agent (Gurman & Kniskern, 1980). Systems models of parent-child interactions assume that children and adults mutually determine each other's behavior and that causality is circular, not linear. This way of viewing human interactions calls attention to the reciprocal nature of adult-child relationships.

Another recent theoretical contribution to recognition of the child as active agent is the concept of reciprocal determinism in social learning theory (Bandura, 1978; Mischel, 1977). Reciprocal determinism was introduced in the context of the person-situation debate within personality theory to examine to what extent behavior is determined by environment or by person variables. A corrective to environmental determinism, reciprocal determinism proposed an interactionist answer: behavior is determined by the mutual interaction of person and situation (Bandura, 1983; Houts et al., 1985; Phillips & Orton, 1983).
Hypotheses

Family Therapy is based on the intrinsic connection between husband-wife and parent-child relationships (Bernard, 1972). Childrearing is one of the major issues in husband-wife relations. Parenting stress contributes to a decline in marital quality during childrearing years. Children with behavior problems or those who are temperamentally difficult, such as ADHD children, exacerbate parenting stress and undermine perceived parenting competence. When parents do not agree about their child's behavior, additional concerns over discipline, expectations, and responsibility for the child are likely to cause dissatisfaction in the marriage. Block, Block, & Morrison, (1981) found that parental disagreement about childrearing was related to observed ratings of family and marital harmony 2.5 years later, as well as to divorce status 10 years later.

The present study focuses on the relationship of interparent agreement between mothers' and fathers' perceptions of their ADHD children's behavior and mothers' and fathers' self reports of marital satisfaction with regard to the ADHD child's age, gender, and severity of behaviors typically associated with ADHD. Most previous research concerning the parent-child relationship has been with ADHD boys and their mothers. This study extends those
findings to include ADHD girls and fathers.

There is abundant research reflecting significant correlations between marital discord and child behavior problems, particularly externalizing behavior problems such as those exhibited by ADHD children (Christensen, Phillips, Glasgow, & Johnson, 1983; Emery & O'Leary, 1982; Porter & O'Leary, 1980; Rutter, 1971). These samples consisted of boys, however, Whitehead (1979) extended these findings to include girls. Parents who perceive their children as less well adjusted report lower levels of marital satisfaction (Brody & Forehand, 1986; Forehand, Wells, McMahon, Griest, & Rogers, 1982; Griest, Forehand, Wells, & McMahon, 1980; Rickard, Forehand, Wells, Griest, & McMahon, 1981).

ADHD children tend to act differently with each of their parents (Barkley, 1981a). A number of researchers have suggested that fathers do not observe the same or as many behaviors as mothers on child behavior ratings (Hulbert, Gdowski, & Lachar, 1986; Jacob, Grounds, & Haley, 1982; Jensen, Traylor, Xenakis, & Davis, 1988). Also, fathers appear to obtain greater compliance from their children than do mothers (Barkley, 1981a). Women receive more aversive responses and fewer pleasurable responses from their children than do fathers, and mothers spend more time actively involved in parenting (Patterson, 1982).

Most studies devoted to handicapped children's impact on families have used mothers as their primary subjects.
Their increased caring duties and their vulnerability to the effects of stress, as reflected in their complaints and symptoms, made them the focus of interest (Breen & Barkley, 1988; Humphries, 1979). Margalit and Heiman (1986) suggested that mothers are more affected by family crises than fathers due to excessive demands for care of the exceptional child. Mash and Johnston (1983) found that mothers of ADHD children often feel depressed, socially isolated, and restricted in their parental roles. Tallmadge and Barkley (1983) observed that ADHD boys engaged in more negative and competing behavior with their mothers than their fathers.

In examining these relationships it is important to note at the outset that the correlational nature of this investigation does not permit an assessment of the directionality of effects. However, recent research has suggested that in most families of ADHD children, the primary contributors to parent-child interactive stress appear to emanate from child characteristics, with parental and environmental characteristics playing an important but secondary role (Barkley, 1981a, 1989; Bell & Harper, 1977; Mash & Johnson, 1990; Schachar, Taylor, Wieselberg, Thorley, & Rutter, 1987). In any case, the question of whether ADHD produces marital disturbances, or vice versa, does not negate the need to describe the influences of ADHD children on the parent-child relationship and the marital
relationship. For purposes of this study, it was posited that:

(1) Mothers and fathers who have higher interparent agreement on their perceptions of their ADHD children's behavior will independently report greater marital satisfaction while mothers and fathers who have lower interparent agreement on their perceptions of their ADHD children's behavior will independently report lower marital satisfaction.

(2) Interparent agreement on the perceptions of ADHD children's behavior will correlate positively with interparent agreement on the reported degree of bother such behavior poses to mothers and fathers.

(3) Mothers and fathers of ADHD girls will have higher interparent agreement on their children's behavior and will independently report greater marital satisfaction than mothers and fathers of ADHD boys.

(4) Mothers and fathers of older ADHD children will have higher interparent agreement and will independently report greater marital satisfaction
than mothers and fathers of younger ADHD children.

(5) Mothers and fathers who perceive their ADHD children's behavior as more severe will independently report lower marital satisfaction than mothers and fathers who perceive their ADHD children's behavior as less severe.

(6) Mothers will perceive their ADHD children's behavior as more severe and will report lower marital satisfaction than their spouses.
CHAPTER II
LITERATURE REVIEW

The following review explores the literature on
Attention-deficit Hyperactivity Disorder, mothers' and
fathers' perceptions of their ADHD child's behavior, and the
impact of such behavior problems on mothers' and fathers'
ratings of marital satisfaction. Also included is an
historical perspective concerning the conceptualization of
the child.

Attention-deficit Hyperactivity Disorder

Attention-deficit Hyperactivity Disorder (ADHD), also
referred to as "hyperactivity," is regarded as the most
common psychiatric disorder of childhood. It accounts for
almost half of all referrals to the nation's mental health
clinics for children (Barkley, 1981a; Gordon, 1986;
Grinspoon, 1985;). ADHD has become the most widely studied
disorder of childhood during the past two decades.
Disagreements over diagnosis, characteristics, prognosis,
and treatment are commonplace, leading to much confusion
over the way practicing clinicians should approach the
management of the disorder.

History

Attention-deficit Hyperactivity Disorder (ADHD) was
described in the professional literature as early as the turn of the century. While the symptoms of the disorder have not changed much since then, the disorder itself has probably been renamed more than 20 times (Barkley, 1981a). The changing labels reflect changing schools of thought on the causes, major symptoms, and treatments of hyperactivity. During its long history, it has received a variety of diagnostic labels; some labels, such as "hyperkinetic" and "hyperactive child syndrome" are descriptive, while others, such as "minimal brain dysfunction (MBD)," "maturational lag," and "learning disabled" imply etiologies or prognosis, or both. Most recently, the American Psychiatric Association has chosen to rename the problem Attention-deficit Hyperactivity Disorder (ADHD).

Serious scientific attention to ADHD has developed only within the past 30 years. Research in the 1960's focused primarily on the motor activity levels of hyperactive children. Definitions of the disorder reflected this emphasis on proposing that hyperactivity was simply excessive quantities of motor activity that brought children exhibiting such activity into conflict with their environment.

In the early 1970's, Virginia Douglas and her colleagues (1972) found that the major deficiency of ADHD children lies in their ability to sustain attention and inhibit impulsive responding to situational demands. Other
researchers replicated these findings, and poor attention span became recognized by many as a paramount problem for ADHD children.

Douglas (1972), along with John Werry (1968), also stressed the early onset of the disorder, its relatively pervasive nature, and its chronicity in terms of lasting well into adolescence. Other research began in areas of food additives (Conners, 1975), genetic factors (Rapoport, Quinn, & Lamprecht, 1974; Stewart, 1973), temperament (Thomas & Chess, 1977; Thomas et al., 1968), and the role of minor physical anomalies (Rapoport, Quinn, & Lamprecht, 1977; Schnakenburg, 1973) in order to predict hyperactivity among children.

In the late 1970's, research from a variety of sources began to suggest that the ADHD child's problems were more widespread and that they encompassed problems in obedience to rules, self-control, and social conduct, as well as the aforementioned attentional deficits. Susan Campbell (1975) reported that these children are less compliant, more attention-seeking, and more in need of supervision than normal children.

These findings were replicated and extended by Barkley and Cunningham (1979) in studies with ADHD boys. These boys were found to be more negative and noncompliant in interactions with their mothers. More recent research has shown that similar reactions occur in the manner in which
teachers and peers respond to the ADD child. Most investigators now believe that the problems in social behavior are more enduring and lead to social maladjustment in the teenage and young adulthood years.

Definition

Although clinicians clearly acknowledge the existence of Attention-deficit Hyperactivity Disorder, there is little consensus of a uniform definition. Some view the disorder solely in terms of excessive motor activity, while others view the disorder in terms of neurological damage. While lacking a clear definition, ADHD was diagnosed by clinicians from highly subjective criteria. In reviewing over 200 studies of hyperactivity, Barkley (1981a) reported that 70 percent of the researchers failed to employ any specific criteria other than their own opinion in diagnosing these children.

In order to reduce the ambiguity in this area, the American Psychiatric Association listed specific criteria in DSM-III (1980). The DSM-III (1980) presented the term Attention Deficit Disorder with or without Hyperactivity. This term was changed to Attention-deficit Hyperactivity Disorder (ADHD) in the revised edition of DSM-III-R (1987). According to the DSM-III-R, the diagnostic criteria for Attention-deficit Hyperactivity Disorder is as follows:

Note: Consider a criterion met only if the behavior is
considerably more frequent than that of most people of the same mental age.

A. A disturbance of at least six months during which at least eight of the following are present:

(1) often fidgets with hands or feet or squirms in seat (in adolescence, may be limited to subjective feelings of restlessness)

(2) has difficulty remaining seated when required to do so

(3) is easily distracted by extraneous stimuli

(4) has difficulty awaiting turn in games or group situations

(5) often blurts out answers to questions before they have been completed

(6) has difficulty following through on instructions from others (not due to oppositional behavior or failure of comprehension), e.g., fails to finish chores

(7) has difficulty sustaining attention in tasks or play activities

(8) often shifts from one uncompleted activity to another

(9) has difficulty playing quietly

(10) often talks excessively

(11) often interrupts or intrudes on others, e.g., butts into other children's games
(12) often does not seem to listen to what is being said to him or her
(13) often loses things necessary for tasks or activities at school or at home (e.g., toys, pencils, books, assignments)
(14) often engages in physically dangerous activities without considering possible consequences (not for the purpose of thrill seeking), e.g., runs into street without looking

Note: The above items are listed in descending order of discriminating power based on data from a national field trial of the DSM-III-R criteria for Disruptive Behavior Disorders.

B. Onset before the age of seven.

C. Does not meet the criteria for a Pervasive Developmental Disorder.

Criteria for severity of Attention-deficit Hyperactivity Disorder:

Mild: Few, if any, symptoms in excess of those required to make the diagnosis and only minimal or no impairment in school and social functioning.

Moderate: Symptoms or functional impairment intermediate between 'mild' and 'severe.'

Severe: Many symptoms in excess of those required to make the diagnosis and significant and pervasive impairment in functioning at home and school and with peers. (DSM-III-R,
Although many clinicians and researchers expressed acceptance of the criteria suggested by the DSM-III (1980) and, subsequently, the DSM-III-R (1987), they listed several criticisms which included a lack of norms at the different ages for determining abnormality of symptoms and the failure to specify whether the condition is pervasive or situational (Barkley, 1981a; Weiss & Hechtman, 1985). Barkley (1981a, 1982) stated that the DSM-III's definition and criteria were too liberal and vague. He defined hyperactivity/ADD as follows:

Hyperactivity, or Attention Deficit Disorder, is a significant deficiency in age appropriate attention, impulse control, and rule-governed behavior (compliance, self-control, and problem solving) that arises by infancy or early childhood, is significantly pervasive in nature, and is not the direct result of general intellectual retardation, severe language delay or emotional disturbance, or gross sensory or motor impairment (Barkley, 1982, p.5).

In addition to redefining hyperactivity, Barkley (1981a, 1982) also listed specific criterion to be employed by clinicians when making diagnostic decisions. Diagnostic Criteria for ADD/Hyperactivity:

1. Parent or teacher complaints of poor attention span, impulsivity, restlessness, and inability to restrict behavior as situation or adult demands.
2. Complaints of behavior place child two standard deviations (i.e. fifth percentile or below) from mean for his/her age and sex group as determined by well standardized behavior scale of parent or teacher opinion.

3. Onset prior to 5 years, 11 months (differs from DSM-III).

4. Duration of symptoms at least one year (differs from DSM-III).

5. Pervasiveness of symptoms such that the child is scored at or below the fifth percentile for either the Home Situation Questionnaire or School Situation Questionnaire.

6. Full Scale IQ greater than 70.

7. Child does not display symptoms of autism or psychosis, or show evidence of blindness, deafness, aphasia or gross neurological disease (e.g. tumors, strokes, neurodegenerative disease, or obvious CNS trauma) (Barkley, 1981a, p. 6).

Barkley's (1981a, 1982) definition of hyperactivity differs from others by excluding children with acquired neurological disease or trauma at any age who developed hyperactive symptoms immediately after the disease or trauma.

Although the majority of clinicians and researchers are using the DSM-III-R (1987) or Barkley's criteria (1981a, 1982, 1984), the lack of concensus regarding diagnostic
criteria is to date a chronic and serious problem. The lack of agreement in terms of selection of criteria hinders the generalizability of research findings, the efforts to develop effective treatment programs, and the comparison of treatment studies (Barkley, 1982; Gordon, 1986).

Prevalence of ADHD

The prevalence of ADHD appears to vary not only as a function of the definition, measures, and statistical cutoff scores to be used, but also as a function of the number of observers needed for agreement on the diagnosis (Barkley, 1981a). This suggests that while observers may agree on what symptoms constitute ADHD, they do not necessarily agree on which children should be labeled ADHD. Most investigators accept a prevalence estimate for ADHD of between three and five percent (Barkley, 1981a) of school-age children, however, others estimate between two (Trites, Dugas, Lynch, & Ferguson, 1979) and 22 (Sleator & Ullman, 1981) percent.

One finding is, however, consistent; that ADHD occurs more often in boys than girls. Recently, Barkley (1987) has indicated that the ratio may actually be closer to six to one in favor of boys. The incidence of ADHD is four times higher in adopted children than in the general population (Barkley, 1981a).
The Families of ADHD Children

A small body of research suggests that the presence of an ADHD child in the home is associated with other aspects of family stress and dysfunction, although the cause-effect relationship cannot be disentangled. Delameter et al. (1981) found that ADHD children came from families characterized by more psychosocial stress including marital separation, illness, alcoholism, and child abuse. Other studies have likewise noted associations between family disorganization and attention deficits (Campbell, 1975; Margalit & Heiman, 1986). Child characteristics may contribute to these family stressors or these family problems may exacerbate symptoms in ADHD children.

Studies have revealed a variety of psychiatric problems in the siblings and parents of ADHD children that are not typically seen in comparison groups of normal children (Barkley, 1981a). Research has shown that parents of ADHD children are more likely to manifest symptoms of hysteria, depression, and psychopathology than parents of normal children. While this might suggest that ADHD develops because of modeling and environmental effects these parental psychiatric problems may have on children, other studies do not support this notion (Barkley, 1981a; Cantwell, 1972; Firestone & Martin, 1979). Studies of adoptive parents of ADHD Children do not find any greater prevalence of these psychiatric disorders in the parents of normal children.
(Morrison & Stewart, 1973). These findings strongly suggest an influence that is more hereditary than environmental. These and other investigations have also revealed a greater occurrence of alcoholism and smoking in the parents and relatives of ADHD children than in either the families of normal children or the adoptive families of ADHD children (Cunningham, Benness, & Siegel, 1988).

Most studies devoted to the impact of handicapped children on families have used mothers as their primary subjects. Their increased caring duties and their vulnerability to the effects of stress, as reflected in their complaints and symptoms, made them the focus of interest (Breen & Barkley, 1988; Humphries, 1979). Only lately has special attention been devoted to the father's role. Several researchers have described the specific impacts of a handicapped child on the father (Berman, 1979; Mash & Johnston, 1983).

A study by Margalit and Heiman (1986) found that parents of ADHD children reported higher levels of self-anxiety, with increased emphasis on the system-maintenance dimension of their family system. Parents viewed the climate of the family as being more rigid, controlled, and ordered. One explanation given by the authors was that perhaps the emphasis for more control and order was compensatory owing to the invisibility of the syndrome and the inconsistent behavior of the ADHD child.
Such inconsistency seems to contribute to the increased stress and anxiety reported by these parents. An additional finding was that mothers were more affected by the family's crisis than were fathers. The study regarded the mothers' emphasis on control and organization as an adaptive reaction to the ongoing stress related to excessive demands for care of the exceptional child. This supported an earlier study by Humphries (1979), however, it was in contrast to conclusions drawn by Moos and Moos (1983) who found such restrictiveness to be associated with maladjustment. Margalit and Raviv (1983) also found that the continuous stress in the families of ADHD children facilitated cooperation between parents and increased the similarity of the fathers' and mothers' perceptions.

In a study by Hartsough and Lambert (1982), parents reported more disciplining interactions with their ADHD children than control parents. Over time, parents of ADHD children tried many different approaches for managing the behavioral symptoms associated with the hyperactive label. Whether the differences in disciplining styles preferred by parents existed before the appearance of the ADHD symptoms in the child needs further investigation, as does the way in which the disciplining affects the child's social and emotional development. However, the view that equates more discipline with bad parenting may not hold for the parents
of ADHD children. An additional finding was that the random control parents reported having significantly more children (two others on the average) than the parents of ADHD children.

In comparison to severe handicaps such as mental retardation, the attention deficit syndrome seems less handicapping, yet it represents a source of confusion because of the invisible nature of such a handicap that reveals itself only in certain situations. It is difficult for parents and family members to cope with a child that functions in an atypical manner in certain situations, despite his or her age-appropriate and normal behavior in other situations.

The Impact of ADHD Children: Drug Studies

Recent years have witnessed a welcome increase in the study of reciprocal influences in parent-child interactions. Owing to the dramatic effects of stimulant medication, primarily Ritalin, there have been some unique opportunities available to researchers in the study of ADHD children, their parents, and their families (Barkley, 1981b; Cantwell & Carlson, 1978). The effects of stimulant medications have allowed investigators to manipulate child behaviors, such as activity level, attention, and impulsivity, and study the impact of these behaviors on parents-child interactions. The literature has suggested several ways in which
children's behavior can impact adults.

A beneficial effect of Ritalin on the quality of the parent-child interaction has been detected in experimental situations. ADHD children who are treated with Ritalin show more frequent compliance with parental commands, reduced off-task behavior, and less defiance (Barkley, 1981b; Barkley & Cunningham, 1979; Humphries, Kinsbourne, & Swanson, 1978). At the same time, parental commands decrease in frequency and parents respond more positively and with more frequent rewards to child-initiated behavior.

Cunningham & Barkley (1978) observed the interactions between a pair of ADHD twins and their mother during alternating drug and placebo trials. The observations showed that medication-induced improvements in child compliance were associated with dramatic reductions in the frequency and intensity of maternal commands.

A recent study by Schachar and his colleagues (1987) assessed the effects of Ritalin in family functioning and relationships in boys 6 to 10 years of age presenting with ADHD. Significant short-term improvement was found in interpersonal relations among families of ADHD children whose behavior improved while on Ritalin. In these families, the affective tone of the parent-child relationship improved, expressed maternal warmth increased, expressed maternal criticism decreased, and fewer negative encounters with siblings were reported.
The cumulative results of these studies suggest that the parents', primarily the mothers', behavior is to a great degree a reaction to the difficult behavior of their ADHD children and not so much an instigator of it. However, it would be inappropriate to conclude that the ADHD child's behavior disturbance was the sole cause of poor parent-child relationships, or that improvement in these relationships can only follow behavioral improvement in the child.

The short-term efficacy of stimulant medication in improving the behavior of most ADHD children is indisputable (Barkley, Karlsson, Strzeleck, & Murphy, 1984; Gittelman-Klein et al., 1980). It also lends empirical support to the notion of reciprocity in parent-child interactions. Unfortunately, a favorable short-term response to medication does not guarantee a favorable prognosis (Lee, 1981; Weiss, 1983). Although it is a useful means of initiating improvements in ADHD children and their families, other types of intervention, such as parent education, family therapy, and behavioral therapy, are needed to maximize the chances for a successful outcome.

Parent-Child Interactions

Recent research with children having Attention-deficit Hyperactivity Disorder (ADHD) has indicated that their symptoms of inattention, impulsivity, and overactivity result in significant interaction problems with parents (Barkley, 1984). Most of the research that has examined
these parent-child interactions has involved ADHD boys and their mothers.

Many studies have found ADHD boys to be more noncompliant, oppositional, and defiant, and less responsive to the social interactions of their mothers than mother-child dyads involving normal children (Barkley, Karlsson, & Pollard, 1985; Battle & Lacey, 1972; Cunningham & Barkley, 1979). Mothers of ADHD boys provide more commands, supervision, both encouragement and punishment, and are often less responsive to the social initiatives of their sons than mothers of normal boys (Barkley & Cunningham, 1980; Campbell, 1973, 1975). It appears that such interaction conflicts are minimal or inconsistently noted during free play situations, but are often acutely and consistently elicited in situations in which the child must perform assigned tasks under parental supervision (Barkley, 1985; Cunningham & Barkley, 1979; Mash & Johnston, 1982).

The raising of normal children often involves the assignment of chores and tasks to children, typically comprising self-care routines, academic assignments, household chores, social etiquette, and other activities. The aforementioned research on interaction conflicts and the pervasiveness of these conflicts across most situations (Barkley, 1981a; Tarver-Behring et al., 1985) suggests that parents of ADHD children ought to find the custodial care of
such children far more stressful than that of normal children.

This hypothesis was supported in a study by Mash and Johnston (1983) which measured parenting stress. They found mothers of ADHD children more depressed, socially isolated, and restricted in their parental roles than the mothers of normal children. Mothers of ADHD children also reported less attachment to their children and less competence in their parenting skills than those of normal children. Parental stress was greater in parents of younger ADHD children than in older ADHD children. In keeping with the majority of previous research, the study examined primarily mother-son dyads.

While these studies have not addressed the direction of effects, studies using stimulant drugs with ADHD children have offered evidence that the controlling behavior of the mother is more a response to than cause of the child's difficult behavior (Barkley & Cunningham, 1979; Cunningham & Barkley, 1978; Humphries et al., 1978). A complete picture of the reciprocity in these interactions remains limited by methodological problems (Barkley, 1981b; Bell, 1981; Keller, 1981).

The preceding studies of parent-child interactions of ADHD children have been with ADHD boys interacting with their mothers. While an emphasis on studies of ADHD boys is warranted because of the higher incidence of ADHD among boys
(Barkley, 1981a; Safer & Allen, 1976), the lack of studies investigating the social interactions of ADHD boys with their fathers is difficult to understand, especially with the increased awareness of the role of the father in child development (Lamb, 1976).

Research on father-child interactions has typically investigated the father's interaction with his normal infant or toddler-age child and has examined the unidirectional influence of the parent on the child (Henderson, 1980). In studies comparing fathers with mothers, the fathers were more physical in playing with their children and their children were more responsive to the play initiated by the fathers (Clarke-Stewart, 1978). Fathers were also more active while playing with their children, especially with their sons (Lamb, 1976).

Investigations of school-age children have revealed that fathers differed in the types of interactions they engaged in with their sons and daughters, while mothers tended to respond in a like manner to both sons and daughters (Langlois & Downs, 1980). Fathers were more negative in interactions with their sons (Langlois & Downs, 1980) yet more supportive of their sons being active (Tauber, 1979), whereas mothers' negative responses did not differ as a function of the sex of the child.

In the few studies investigating the interactions of fathers with their school-age children with behavior
problems, the father's behavior toward his child has differed as a function of the child's psychological adjustment, while the mother's behavior has not (Love & Kaswan, 1974). Fathers of problem children also adopted an interpersonal perceptual style that was more negatively biased than that of fathers of highly adjusted children (Stollak et al., 1982).

Although the investigation of father-child interactions of ADHD children has not been adequately studied, recent evidence suggests that throughout the child's development, mothers and fathers differ in the manner in which they interact with their children. The evidence also suggests that the child's response to his parent's behavior is partially determined by which parent initiated the interaction toward the child.

A study examining parent-child interactions of normal and ADHD boys with their mothers and fathers was conducted by Tallmadge and Barkley (1983). Results indicated that fathers, like mothers, were more directive and gave more commands to their ADHD boys than mothers and fathers of normal boys. However, the ADHD boys responded to their parent's commands differently depending on which parent gave the command. ADHD boys engaged in more negative and competing behavior in response to their mother's commands than did normal boys. In response to their father's commands, ADHD boys engaged in a percentage of negative and
competing behavior equal to that of normal boys. This would seem to bear out the complaints of mothers of ADHD boys that their children tend to behave better for their fathers than their mothers (Barkley, 1981a).

Few studies of ADHD girls exist relative to the overabundance of literature on ADHD boys. Recent research on ADHD girls (Berry, Shaywitz, & Shaywitz, 1986; DeHaas & Young, 1984) found them to have significantly less conduct disorders than ADHD boys. This might suggest that the care and raising of ADHD girls could be less stressful than that of ADHD boys. However, Befera and Barkley (1985) found no sex differences in ratings of child psychopathology between ADHD girls and ADHD boys while finding greater marital discord and maternal depression among mothers of ADHD boys.

A recent study by Breen and Barkley (1988) found few differences between ADHD girls and ADHD boys in ratings of child psychopathology. The exceptions were that ADHD girls were rated as somewhat more depressed and hyperactive than ADHD boys, even though they were viewed as equally hyperactive and inattentive by their teachers. These results conflict with those by Berry et al. (1985) and DeHaas and Young (1984). Breen and Barkley (1988) conclude that ADHD girls and ADHD boys are far more similar than they are different in their profiles of psychopathological characteristics. This study extends the findings for parenting stress by Mash and Johnston (1983), that ADHD
boys, when compared to normal boys, were rated as more deviant and demanding in all child domain factors, to include ADHD girls, as well. Hence, ADHD girls and ADHD boys appear equally distressing to their parents in their care and management.

The Marital Relationship

The relationship between husbands and wives and their marital satisfaction have impact not only on their own psychological well-being but on their children's well-being. The mental health of each spouse is important because psychopathology in parents is associated with psychopathology in children. This is not only due to possible shared genetic factors but also because such parents model aberrant behavior and because psychological disorders in parents are related to disruptions in parenting practices.

Marital satisfaction is highly correlated with both family satisfaction and life satisfaction (Olson, Sprenkle, & Russell, 1979). Marital dissatisfaction is related to family conflict, and discord is associated with behavior problems in children (Oltmanns et al., 1977; Porter & O'Leary, 1980). Although it is frequently cited that women are more dissatisfied than men in their marital relationship, this may be to some extent associated with general family dissatisfaction and the parenting role of
women (Hetherington & Martin, 1986). Women receive more aversive responses and fewer pleasurable responses from their children than do fathers, and mothers spend more time actively involved in parenting (Patterson, 1982).

Marital Discord and Child Behavior Problems

A number of investigators have indicated that there is a relationship between marital discord and the severity or frequency of behavior problems in children (Emery & O'Leary, 1982; Frick, Lahey, Hartdagen, & Hynd, 1989; Oltmanns et al., 1977; Porter & O'Leary, 1980; Rutter, 1971). Although most research has been correlational, theory suggests that these variables have a complex reciprocal relationship to dysfunctional parent-child relationships and child behavior disorders. Most studies, however, view marital discord as a causal variable or a precursor to child behavior problems.

Behavior therapists have been largely concerned with parents' roles as models, reinforcers, and punishers in the etiology and treatment of children's problems (Oltmanns et al., 1977; Patterson, 1974). Johnson and Lobitz (1974) documented significant relationships between children's disruptive behavior and marital discord. The recent cognitive emphasis in behavior therapy has directed attention to knowledge, expectations, and perceptions as crucial factors in deviancy. Studies by Lobitz and Johnson (1975) and Griest et al. (1980) have indicated that parent
perception measures are more discriminative of referral status than the child's observed behavior.

Family systems therapists acknowledge such determinants of children's problems, but they have placed much stronger emphasis on the importance of parents' marital adjustment than behaviorists. Family therapists have implicated marital discord in the genesis of child disturbance. Framo (1975) hypothesized that "whenever you have a disturbed child, you have a disturbed marriage" (p. 22). Satir (1964) noted that parents' dissatisfaction with their own relationship may not only precipitate children's behavior problems but maintain them as well. Systems theory emphasizes family alliances that force the child to side with one parent and "detouring" of marital conflicts onto the child (Margolin, 1981).

To a great degree, psychodynamic, systems, and behavior therapists have all emphasized marital discord as a determinant and/or maintainer of childhood problems. Love and Kaswan (1974), psychodynamic therapists, found that parents of clinic-referred children demonstrated greater communication difficulties and less marital satisfaction than did parents of nonclinic children.

Another prominent perspective on child disturbance has been an interactional one. In this viewpoint, dysfunctions in the parent-child interaction account for the child's deviant conduct (Patterson, 1982). A large body of
empirical literature is consistent with the interactional model. Observation studies have shown higher rates of parental negative behavior, higher rates of parental commands, higher rates of child negative behavior, and lower rates of child noncompliance in families with behavior problem children versus matched families with normal children (Griest et al., 1980; Patterson, 1982; Webster-Stratton, 1985, 1988).

Several studies have provided support for an apparent relationship between marital discord and child behavior problems (Emery & O'Leary, 1982; Porter & O'Leary, 1980; Rutter, 1971; Whitehead, 1979). In a heterogeneous clinical sample of two-parent families, Porter and O'Leary (1980) found that maternal reports of overt marital hostility was significantly correlated with maternal reports of conduct problems in boys but not girls. Fathers' reports were not assessed in this study.

Emery and O'Leary (1979, cited in Porter & O'Leary, 1980) found similar correlations in those reported above, although scores for boys and girls were reversed. However, a later study by Emery and O'Leary (1982) revealed significant correlations for marital discord and boys' problems rather than girls and thus, supported earlier findings by Porter and O'Leary (1980). This study used mothers and fathers in its sample.

In a classic and influential article, Rutter (1971)
reported a strong association between marital disturbance in parents and noncompliance in their sons. Marital discord was also more strongly related to conduct problems, or externalizing behaviors, as opposed to anxiety disorders, or internalizing behaviors. This supported findings by Emery and O'Leary (1982). Rutter's sample was limited to children of psychiatrically disturbed parents and data were provided only on the children's behavior in school, thus, limiting the generalizability of the findings.

Research by Whitehead (1979) suggested that Rutter's finding of a sex difference may have been an artifact of a tendency for boys to act out in school and for girls to act out at home. In support of this alternative, in a large random sample of British children \( (N = 2,775) \), she reported finding a relationship between marital discord and parents' rating of problems for both boys and girls. These results are contrary to most findings that show a greater association between marital discord and boys (Emery & O'Leary, 1982; Porter & O'Leary, 1980; Rutter, 1971).

The apparent differential impact of marital discord on boys and girls raises many questions in the literature. It is possible that girls' response is more subtle than boys (Emery & O'Leary, 1982). Perhaps girls may be especially adept at handling their parents' marital discord, or the effects on them may be serious but delayed (Hetherington, 1972). In a study of divorce, Wallerstein and Kelly (1980)
found clinical reports of more fighting in front of boys before and after the parental separation. It may be, however, that boys and girls are differentially exposed to some correlate of marital discord and that this variable accounts for the sex effect (Hetherington, Cox, & Cox, 1978).

Several studies have investigated the possibility of a third variable that links marital discord to child behavior problems. Strong associations have been found between the effects of maternal antisocial personality and socioeconomic status (SES) (Farrington, 1978; Rutter, 1978) on marital satisfaction and child conduct problems (Robins, West, & Herjanic, 1975; West & Farrington, 1973). A link between parental depression and child conduct problems has also been indicated (Orvaschel, 1983). Other investigators have proposed models linking parental psychopathology, marital disturbance, and child behavior problems (Emery, Weintraub, & Neale, 1982; Rutter, 1971) and have reported important independent influences of marital disturbance.

A recent study by Frick and colleagues (1989) found the expected correlation between marital satisfaction and child conduct problems. However, they proposed the correlation was due to a common association with a third variable, maternal antisocial personality. Consistent with predictions, SES was found to be associated with child conduct problems, however, it was not found to be correlated
with marital satisfaction. These results are inconsistent with earlier studies that have reported associations between marital satisfaction and conduct problems that are independent of maternal psychological adjustment (Emery & O'Leary, 1982; Rutter, 1971).

Christensen, Phillips, Glasgow, and Johnson (1983) found that depression had a negative impact on marital adjustment and on advocacy of a positive approach with children. Results determined that parental perceptions of child behavior problems are associated with marital discord and parental negative behavior toward the child, but not with the independently observed behavior of the target child. These results are consistent with family theory notions that the child is sometimes the scapegoat of parental distress in the marriage (Boszormenyi-Nagy & Ulrich, 1981; Minuchin, 1977).

Although previous research has documented behavioral differences in clinic children and nonclinic children (Griest et al., 1980; Forehand et al., 1975; Lobitz & Johnson, 1975), considerable overlap between the two groups is evident. Certain groups of referred families can be identified whose children behave no differently from normals (Rickard et al., 1981). Thus, previous research is consistent with these findings in reducing the importance of the target child's behavior in the labeling and referral process and in implicating other family variables, such as
marital distress and parental pathology.

Another group of researchers have looked at marital discord as predictive of treatment outcome for child behavior problems (Barkley, 1981b; Brody & Forehand, 1985; Dadds, Sanders, Behrens, & James, 1987; Dadds, Schwartz, & Sanders, 1987; Oltmanns et al., 1977). In a review of family variables associated with child behavior disorders, Griest and Forehand (1981) concluded that the referral status of children and subsequent treatment success may vary with parental perceptions of their child's behavior, personal adjustment, marital status, and social support. These data indicate that marital discord may be a central problem facing clinicians and researchers attempting to demonstrate reliably the effectiveness of behavioral parent training in producing change.

Empirical support for the negative impact of marital discord on treatment outcome is, however, tentative. Clinical impressions have supported a negative impact (Kent & O'Leary, 1976; Patterson, Cobb, & Ray, 1983). The few reported studies specifically designed to address this issue found no relationship (Oltmanns et al., 1977) or minimum effects (Brody & Forehand, 1985) of marital discord on treatment outcome at termination of treatment. However, a recent study found that marital discord was predictive of poor treatment outcome assessed at a 6-month follow-up to treatment (Dadds, Schwartz, & Sanders, 1987). Thus, to
produce durable effects, parent training approaches to treating conduct disorders may need to incorporate a marital intervention for families who exhibit marital discord as well as the child behavior problems (Dadds, Sanders, Behrens, & James, 1987).

In brief, there is evidence from varying theoretical orientations that marital discord is clearly related to childhood behavior problems. However, the evidence is sparse, given the overriding viewpoint that a relationship exists - and questions of the directionality of effects remain.

There are at least three plausible explanations for the relationship between child behavior problems and marital discord. First, it is possible that marital dissatisfaction causes conduct problems in children through the disruption of parenting processes, modeling of conflictual behavior by the parents, the stressful impact on the child, or some other psychosocial process (Porter & O'Leary, 1980; Rutter, 1971). Second, based on Bell's (1968) concept of child effects on parents, Houts, Shutty, and Emery (1985) suggested that the presence of a child with conduct problems in the family could cause marital dissatisfaction. Third, it is possible that no causal relation exists between marital discord and child conduct problems but that a statistical correlation exists because both variables are causally related to a third variable, such as parental
antisocial personality (Frick et al., 1989; Robins et al., 1975; West & Farrington, 1973).

The majority of this research is correlational, however, most results are interpreted in the direction of marital discord as a causal variable to child behavior problems. Reverse causality provides an alternative interpretation. It could be argued that a discordant marriage does not affect a child; rather, a deviant child may place undue strain on a marriage. Indeed, it has been found that children can decrease marital satisfaction, as indexed by such findings as a decline of satisfaction after the birth of the first child, the impact on a marriage of raising a handicapped child, and surveys indicating that parents report that their children can place a stress on the marriage (Lerner & Spanier, 1978). It seems likely that a child with behavior problems would be another source of strain. In agreement with others (Bell, 1968; Lerner & Spanier, 1978), this study is conducted with this focus in mind: that the best explanation of the relationship between marital discord and child behavior problems will prove to be one of reciprocal influence.

Marital Discord and ADHD Children

There are a surprisingly small number of studies addressing marital discord and the child behavior problems exhibited by ADHD children. Although mothers of ADHD
children report more marital discord than those of normal children (Befera & Barkley, 1985; Firestone, Peters, Rivier, & Knights, 1978), Prinz, DeRosset Myers, Holden, Tarnowski, and Roberts (1983) found no relationship between marital adjustment and teacher reports of conduct problems and aggression at school. Hechtman (1981) reported that, although the marital relationships of parents of normal and ADHD children did not differ, the emotional climate in their homes and overall scores on family questionnaires were poorer than those of normal children. Szatmari, Boyle, Rae-Grant, and Links (1984), however, reported that, although the relative odds of family dysfunction were higher in ADHD groups, this was linked to the co-occurrence of other psychiatric disorders.

A recent study by Cunningham, Benness, and Siegel (1988) suggested that ADHD is more closely linked to measures of family dysfunction than to measures of marital conflict. These data revealed little differences between ADHD families and control families in regards to family functioning. Results suggest that ADHD children may have a limited impact on well-established patterns of communication and problem solving. Parental management strategies, parenting stress, maternal depression, and extended family relationships appeared to be more closely related to child behavior problems than marital satisfaction.

Earlier research by Barkley (1981a) noted marital
discord in many families due to a discrepancy in child compliance for mothers and fathers. Fathers appear to obtain greater compliance from their children than do mothers. The result is that marital difficulties are quite likely to develop around child management issues, unless the fathers can accept that the children do behave differently for different adults and are really presenting problems for their mothers.

Mothers' and Fathers' Perceptions of Child Behavior

Children are generally referred to psychology clinics by their parents. Although the initial impetus for referral often comes from a teacher or other professional, it is probably safe to assume that children are usually not referred as clients unless their parents perceive the child as having a likely need for psychological help. Because the parents' perception of their children undoubtedly affect parent-child interaction and consequently child behavior, a considerable amount of effort has recently been devoted to identifying those factors that contribute to parental perceptions of deviant child behavior.

Most studies concerned with the relationship between parental perceptions of deviance and actual child functioning fall into two categories. The first category includes studies designed to determine whether parent perceptions reliably discriminate clinic from nonclinic
children. The second category examines the unique contributions of parent adjustment variables and marital satisfaction to parental perceptions of deviance.

The results of the studies in the first category demonstrate that parental perceptions of child deviance discriminate clinic and nonclinic children. Furthermore, independent observations in these studies indicate that clinic-referred children actually display more noncompliant and deviant behavior than do nonclinic children (Copeland, 1985; Griest et al., 1980; Hartsough & Lambert, 1982; Patterson, 1982; Webster-Stratton, 1985, 1988). These data suggest that parents are reasonably accurate in their perceptions.

However, the results of some of these studies, as well as other investigations (Rickard et al., 1981), indicate a considerable overlap in the behavior of clinic and nonclinic children. That is, although parents of clinic-referred children perceived their children as more deviant, the children could not always be differentiated behaviorally from those of a nonclinic status (Griest et al., 1980).

Studies in the second category mentioned above have examined the covariation of measures of parental psychological adjustment and marital satisfaction with parental perceptions of child behavior. The approach taken by these researchers has been to relate levels of personal distress (depression) and marital adjustment levels with
parental perceptions of deviant child behavior (Brody & Forehand, 1986; Christensen et al., 1983; Forehand et al., 1982; Griest et al., 1980; Griest, Wells, & Forehand, 1979; Rickard et al., 1981). The results of these studies have indicated that parents, almost exclusively mothers, who report higher levels of depression and lower levels of marital satisfaction perceive their children as less well adjusted. Among nonclinic families, these associations are weak.

In several of these studies measures of personal distress accounted for more variance in parental perceptions of child adjustment than did objective evaluations of child behavior (Christensen et al., 1983; Forehand et al., 1982; Griest et al., 1979). Such results have prompted speculation that the objective nature of child behavior, compared to assessments of parental pathology, is relatively unimportant in the labeling and referral process (Christensen et al., 1983).

A recent study by Brody and Forehand (1986) found a significant interaction that confirmed the combined influence of the child's behavior and maternal depression. Children were perceived as being more maladjusted when they displayed high rates of noncompliant behavior and their mothers reported high levels of depression. However, this research demonstrated clearly that mothers who reported similar levels of depression rendered different judgments.
regarding their child's adjustment depending on their child's rate of noncompliant behavior.

Ross (1972) argued that parental perceptions are a product of both the child's behavior and the tolerance level of the parent. Dysfunctions in parental adjustment may result in lowered tolerance of a child's behavior, due to increased stress associated with depression. Depression was also associated with lower marital satisfaction for mothers.

Very little research has been conducted with the fathers of conduct-problem children. In one of the few available studies, Schaughency and Lahey (1985) used teacher ratings as the operational criteria for judging the accuracy of parent ratings of child misbehaviors. Their research indicated that fathers' ratings were not correlated with teachers' ratings of the children's externalizing behavior, whereas mothers' ratings were significantly correlated with teachers' ratings. These results did not support previous findings showing depression to be a significant predictor of mothers' perceptions. They explained that the fathers' lack of accuracy on ratings of their children's misbehaviors may have resulted because fathers usually spend less time interacting with their children than do mothers.

It could also be argued that the teachers and mothers may have had more similar ratings of children's misbehaviors than fathers not because the mothers' perceptions were more accurate than fathers but rather because the mothers and
teachers were more likely to have communicated previously about the children. On the other hand, fathers may provide a different but not inaccurate picture of the problem child's behaviors as children interact differently with each parent (Clarke-Stewart, 1978; Lamb, 1976, 1985, 1986; Schauhency & Lahey, 1986).

A study by Webster-Stratton (1988) reported findings that contradicted and failed to replicate the study of Schauhency and Lahey (1985). Supporting earlier research findings, Webster-Stratton (1988) concluded that mothers' perceptions of their children's deviant behaviors were significantly influenced by personal adjustment measures and, in particular, by maternal depression (Brody & Forehand, 1986; Christensen et al., 1983). In fact, maternal depression was found to be a better predictor of maternal reports of children's deviant behaviors than teacher's independent reports of child deviance.

On the other hand, fathers' reports were comparatively less influenced by personal adjustment measures, and there were significant correlations between father and teacher reports of children's behavior. Mothers' reports of child behavior problems were positively correlated with home observations of mothers' negative interactions with their children. Mothers' reports of low marital satisfaction and high stress were correlated with home observations of mothers' total commands in addition to negative behaviors.
There were no significant correlations between fathers' perceptions of deviant child behaviors and father behaviors. These data seem to suggest that fathers may cope with stress and child problems differently than mothers.

The association between child temperament and mothers' and fathers' perceptions of child adjustment was investigated in a study by Brody, Stoneman, and Burke (1988). The parents' perceptions of their children's level of activity, persistence, and emotional intensity were found to be related to their perceptions of child adjustment. Maternal and paternal ratings of temperament were moderately correlated (e.g., .42 to .55) supporting previous research with mothers and fathers (Brody & Forehand, 1986; Griest et al., 1979).

Breen & Barkley (1988) found that ADHD girls were perceived by their parents to be somewhat more depressed and hyperactive than ADHD boys, even though they were viewed as equally hyperactive and inattentive by their teachers. Both ADHD girls and boys posed greater stress for their mothers, and their mothers reported greater family and personal distress than the mothers of non-ADHD children. Data concerning parent perceptions of boys versus girls is inconclusive and inconsistent (Berry et al., 1985; DeHaas & Young, 1984).

Parents' perceptions of the parenting skills were assessed in one study. Mash and Johnston (1983) found that
parents of ADHD children reported less confidence in their parenting knowledge and mothers reported more stress associated with the mother-child relationship, more role restriction, and more social isolation. These findings may indicate, consistent with clinical reports, that mothers feel drained by the demands of an ADHD child and isolated because of their reluctance to take their child visiting or on outings. Mothers of younger ADHD children in this sample also reported more self-blame and depression.

These findings agree with other studies documenting more maternal distress in families with a range of behavior-disordered children (e.g., Griest et al., 1980). General family distress would not be expected to be specific to ADHD but to be associated with child psychopathology in general. However, data such as these underscore the need for more systematic studies of the family environment of ADHD children since there is accumulating evidence that family factors influence both the nature of symptomatology and outcome (Paternite & Loney, 1980) and have obvious implications for intervention (Mash & Johnston, 1983).

**Parent Ratings of Their Children**

During the past three decades, investigators interested in the assessment and classification of childhood psychopathology have made increasing use of rating scales and behavior checklists with which a "rater" (e.g., parent, teacher, therapist) could describe a child's behavior (Jacob
et al., 1982). Information collected with these instruments has provided the data base from which empirically derived syndromes, such as ADHD, have been obtained.

The study of interparent agreement of child ratings is a relatively recent area of inquiry. Traditionally, research tended to ignore the father's role in parent-child relationships. Moreover, this tendency is being reversed with an increase in research interest in the relationship between fathers and their children. An important facet of this new research involves interparent comparisons.

A study by Burrows and Kelley (1983) examined interrater reliability of parent ratings of the behavior of nonclinic children using a behavioral checklist. Parents achieved higher rates of agreement ($x = .81$) than in most studies which report between 36-60%. Those parent pairs who agreed the most did not necessarily spend a large amount of time in the same kind of situations with their child. However, the high amount of agreement obtained by parents in this study appears to be derived from a shared familiarity with their child's behavior across a variety of situations.

Parents of clinic children tend to have lower interrater reliability than do parents of nonclinic children (Ferguson et al., 1974; Kashani et al., 1983; Miller, 1964). The nonclinic child may behave more consistently as he or she moves from situation to situation, whereas the disturbed child may vary.
Ratings of videotaped behavior have been found to reflect the rater's personality and attitudes, especially when there are fewer and less intense symptoms of pathology in the behavior being rated (Simeon, Coffin, & Marasa, 1976). Thus, questions arise as to the relative influence of various sources of discrepancy in parent agreement, as well as possible implications of such influences.

In a clinical sample, Hulbert, Gdowski, and Lachar (1986) found parental agreement, which ranged from 66-77%, to be a function of the type of index used and the type of behavior being rated. Results suggest that the fathers did not observe the same, or as many, behaviors as mothers, a finding well documented in the literature. These conclusions supported an earlier study by Jacob et al. (1982).

The most extensive research to date concerning interparental agreement was conducted by Peter Jenson and colleagues in 1988. The first of two studies examined the effects of parent and child gender and parental psychiatric symptoms on the reliability and agreement of children's and parents' reports of children's symptoms and behavior problems. In this nonclinical sample, results suggest that fathers and mothers differ significantly in the ratings of the son's behavioral problems. Mothers tended to rate their sons as having more problems. Although significant differences between fathers' and mothers' ratings for girls
were not found in this study, mothers did tend to rate daughters higher. These findings parallel the reports by Achenbach and Edelbrock (1983) about clinical samples. Thus, interparent reliabilities when rating sons may indicate a higher tolerance in fathers than in mothers in perceiving sons' behavioral problems. Alternatively, mothers may be unduly sensitive and overreport sons' problems.

Jensen, Traylor, Xenakis, and Davis (1988) also found agreement to be enhanced between parents when they are reporting on external, observable behaviors that violate social role expectations. For example, aggression in a girl may be less tolerated and more widely reported than aggression in a boy, based on gender stereotyping and adult expectations of children's appropriate sex role behaviors. This supports the findings by Hulbert et al. (1986) and Breen and Barkley (1988).

Supporting previous research (Brody & Forehand, 1986; Forehand, Lautenschlager, Faust, & Graziano, 1986; Griest et al., 1979), moderate correlations between the parents' own symptoms and their reports of the child's problems were noted. Possible explanations for this include: a symptomatic parent could be more sensitive to the moods of his or her child; or, the parent and the child may both reflect the presence of a third variable, such as genes or environment. This effect was more pronounced when mothers
rated sons on internalizing behavior.

In summary, the overall results of this study (Jensen, Traylor, Xenakis, & Davis, 1988) indicate that interparent agreement is significantly affected by the parents' own gender, the sex of the child, the parents' psychiatric symptoms, and the behavior being rated. Fathers' own symptoms seem to affect their ratings of daughters more than sons, while mothers' symptoms seem to affect more their reports of sons than daughters.

The companion study by Jensen, Xenakis, Davis, and Degroot (1988) looks primarily at the relationship between parent and child self-reports rather than interparent agreement. However, the data suggest that family psychosocial and demographic characteristics influence parent and child ratings. Variables, such as familiarity of the target child, stepparent status, family size, stress levels, the child's characteristic play patterns, and social desirability response sets, may affect the reliability of reports about boys' and girls' symptoms and behavioral problems. The child's age and family SES do not appear to exert major effects on interrater reliability in this sample.

There is growing evidence that mothers and fathers differ in their actual threshold of reporting about child psychiatric problems (Hulbert et al., 1986; Jacob et al., 1982; Jensen, Traylor, Xenakis, & Davis, 1988; Reynolds et
al., 1985) as well as in their response patterns to their children's behavior (Rothbart & Macoby, 1966). Clarification of the relationship between parents' reports of their children's behavior is essential given the pivotal role of such information in both research and clinical practice in child psychopathology. Additional research is needed to examine the significance of psychological and family variables influencing parent agreement of their child's behavior. Furthermore, this brings up questions as to how parent agreement is manifested in other domains, such as the parent-child relationship and the marital relationship.
CHAPTER III
Methodology

The literature supports investigation of a relationship between parents' perceptions of child behavior problems and parents' level of marital satisfaction. The researcher proposes a child effects model of family dynamics based on the work of Bell (1968, 1981) and Bell & Harper (1977). Although this model recognizes that interaction in one family dyad can be significantly influenced by the character of interactions in other dyads, its primary emphasis is on the influence of child effects, as opposed to adult effects or a reciprocal approach. Accordingly, parent-child interaction and the marital relationship, as well, are influenced by the behavior of children in the household. Therefore, the research questions developed for this study were addressed by investigating and describing the following relationships:

(a) Interparent agreement on ADHD child's behavior and mothers' self-reports of marital satisfaction;
(b) Interparent agreement on ADHD child's behavior and fathers' self-reports of marital satisfaction;
(c) Interparent agreement on ADHD child's behavior and gender of child;
(d) Interparent agreement on ADHD child's behavior and interparent agreement on the degree of bother the
child's behavior poses to their parents;
(e) Level of marital satisfaction and gender of ADHD child;
(f) Interparent agreement on ADHD child's behavior and age of the child;
(g) Level of marital satisfaction and age of ADHD child;
(h) Mothers' reported level of marital satisfaction and perceived severity of ADHD child's behavior;
(i) Fathers' reported level of marital satisfaction and perceived severity of ADHD child's behavior;
(j) Mothers' perceptions of ADHD child's behavior and father's perceptions of ADHD child's behavior;
(k) Mothers' reported level of marital satisfaction and fathers' reported level of satisfaction.

The researcher expects to find positive correlations between variables in pairs (a), (b), (d), and (f) and negative correlations between variables in pairs (h), and (i). Differences are expected to be found between the interparent agreement means (c) and (f) and the marital satisfaction means (e) and (g) with parents of girls and parents of older ADHD children having higher interparent agreement and higher levels of marital satisfaction than parents of boys and younger ADHD children. Also, differences are expected to be found between the behavior perception means (j) and marital satisfaction means (k) with mothers perceiving their children's behavior as more severe
and reporting lower marital satisfaction than do fathers.

In this study, interparent agreement focused on the reported discrepancy or differences between mothers' and fathers' responses on the Conners Parent Rating Scales-48 (Conners, 1973) concerning their perceptions of child behavior and the degree of bother such behavior posed to them. A total discrepancy or difference score was computed by adding the numerical differences between each pair of mothers' and fathers' responses for each of the 48 items on the questionnaire. This score was used as the value for interparent agreement during data analysis. Used in this way, interparent agreement actually represents the level of interparent disagreement or differences in mothers' and fathers' responses. Therefore, for purposes of analyses, high interparent agreement is indicated by a low difference score, and low interparent agreement is indicated by a high difference score.

Subjects

To acquire 75 married couples with ADHD children, the researcher attended monthly meetings of CH.A.D.D. (Children with Attention-deficit Disorder) in Mecklenburg County, Forsyth County, Greensboro, and High Point, North Carolina. Following a brief explanation of the study by the researcher, letters clarifying the study and consent forms
were given to volunteers who were interested in participating (See Appendix A). Informed consent of one parent was required in order to receive the questionnaires. Consent forms were collected after the meetings by the researcher and CH.A.D.D. coordinators.

To encourage participation in the study, the researcher offered to donate $3.00 to each couple's CH.A.D.D. chapter for every completed packet of materials (consisting of mother's and father's individual packets) received. In addition, coordinators of the four CH.A.D.D. groups and all couples who completed a consent form would receive summaries of the results of the study. Participants were reassured that all information and data would be confidential and anonymous: Their names and addresses would be used only for the purposes of mailing the materials and summaries of the results. The only identifying information on their packets of materials was the name of their CH.A.D.D. chapter in order for donations to be given to the proper group.

Inclusion in the study required participants to be mothers and fathers from intact two-parent families with an ADHD child between the ages of 6 and 16. The ADHD children of participants were required to have been evaluated and diagnosed by a Licensed Practicing Psychologist or Medical Doctor and meet the criteria for ADHD as found in the DSM-III-R (American Psychiatric Association, 1987).
Instrumentation

To assess marital satisfaction and perception of child's behavior, each subject was be asked to complete the Dyadic Adjustment Scale and the Conner's Parent Rating Scale-48, respectively. To collect demographic data and subjective reports of parents' opinions concerning a possible relationship between marital satisfaction and child behavior, each subject will be asked to complete a parent questionnaire.

Measure of Marital Satisfaction: Dyadic Adjustment Scale (DAS: Spanier, 1976)

The DAS is a widely-used instrument that measures the quality of adjustment to marriage. More than 1,000 scientific investigations have used the instrument, and many clinicians have found it valuable in their practices. Numerous reliability and validity studies have been conducted.

The measurement of both partners' perceptions of the relationship makes it possible to obtain several different views of the relationship for integration into a total diagnostic picture. The DAS enables the clinician or researcher to see how the partners' ratings of the relationship converge and differ.

The Dyadic Adjustment Scale (DAS) is a 32-item rating
instrument completed by either or both partners in a relationship. Each item is rated with one of several responses. The DAS includes four subscales: (a) Dyadic Cohesion, the degree to which the couple engages in activities together; (b) Dyadic Satisfaction, the degree to which the couple is satisfied with the present state of the relationship and is committed to its continuance; (c) Dyadic Consensus, the degree to which the couple agrees on matters of importance to the relationship; and (d) Affectional Expression, the degree to which the couple is satisfied with the expression of affection and sex in the relationship. Each item is scored on only one subscale. A total adjustment score is calculated by summing the scores for the four subscales. Normative data are reported on a sample of 218 married couples and 94 divorced couples. Norms are presented separately for married and divorced couples. The DAS may be completed in about five to ten minutes.

Psychometric Issues. The DAS and its subscales have been checked for internal consistency reliability. Spanier (1976) reported the following coefficient alphas: Dyadic Adjustment, .96; Dyadic Cohesion, .86; Dyadic Consensus, .90; Dyadic Satisfaction, .94; and Affectional Expression, .73. Similar coefficient alphas were reported by Filsinger and Wilson (1983).

Several investigators have examined the extent to which
spouses' DAS scores agree with each other. Based on a sample of 108 married couples, Antill and Cotton (1982) reported a cross-spouse correlation of .59 on the total Dyadic Adjustment Scale score. Correlations between husbands and wives for the subscales were .44 for Dyadic Consensus, .58 for Dyadic Satisfaction, .53 for Dyadic Cohesion, and .58 for Affectional Expression. Thus, there appears to be an acceptable amount of agreement between spouses on DAS ratings. However, cases in which spouses' DAS scores do not converge may not necessarily reflect inadequate instrument reliability and validity. Rather, a lack of agreement between spouses may be an indication of areas of discord in the relationship.

Test-retest reliability of the DAS has been shown in a number of studies. Stein, Girodo, and Dotzenroth (1982) reported 11-week test-retest correlations for the total DAS of .96. Belsky, Spanier, and Rovine (1983) reported 12-month stability coefficients ranging from .43 for Affectional Expression among husbands to .82 for the total DAS among wives.

Having been utilized in hundreds of clinical and experimental research studies, the validity of the DAS has been well established (Dobson, 1987; Jacobson, Follette, & McDonald, 1982; Kazdin & Kolko, 1986; Markowski & Greenwood, 1984; Spanier, 1976). Overall, the evidence from the literature supports that the DAS assesses an important
construct which has strong explanatory and predictive utility in the characterization of marital and other dyadic relationships.


The CPRS-48 is a widely used instrument for clinical and research applications with children. Numerous reliability and validity studies have been conducted on the scales. It was adopted by the National Institute of Mental Health as part of its standardized assessment battery for childhood psychopharmacology studies. It was originally designed to help identify hyperactivity and attention deficits in children.

The Conners' Parent Rating Scales-48 are completed by the child's parents. There are six scales: (a) Conduct Problem; (b) Learning Problem; (c) Psychosomatic; (d) Impulsive-Hyperactive; (e) Anxiety; and (f) Hyperactivity Index. Normative data for the CPRS-48 are based on a study of 578 children, aged 3 to 17 years, and separated by their gender (Goyette, Conners, & Ulrich, 1978).

Psychometric Issues. Test-retest reliability over one year for the Conners' Parent Rating Scales range from .40 for the Psychosomatic factor to .70 for the Impulsive-Hyperactive factors (Glow, Glow, & Rump, 1982). Product moment correlations between mothers' and fathers'
ratings of the CPRS-48 range from .46 on the Psychosomatic factor to .57 on the Conduct Problem factor, with a mean correlation of .51. Mother and father ratings on the Hyperactivity Index correlate .55. No significant differences have been found between mother and father ratings (Goyette et al., 1978). Sandberg, Wieselberg, & Schaffer (1980) report an alpha internal-consistency reliability coefficient of .92 for the Hyperactivity Index.

Having been utilized in hundreds of clinical and experimental studies, the validity of Conners' Rating Scales has been well established using a number of different techniques. Overall, the weight of the evidence gained from this voluminous literature is that the scales assess important constructs which have strong explanatory and predictive utility in the characterization of childhood problem behavior (Abikoff, Gittelman-Klein, & Klein, 1977, 1979; Saxon, Dorman, & Starnes, 1976).

Conners' Rating Scales were originally developed for documenting behavior change during pharmacotherapy among hyperactive children. They have become widely used in the assessment of medication effects for hyperactivity and Attention-deficit Hyperactivity Disorder (ADHD), especially in studies of the effects of Ritalin (Eyberg, 1985; Solanto & Conners, 1982; Sprague & Sleator, 1973).

As a general indicator of hyperactivity, the Conners' Rating Scales have been shown to be valid in a number of
ways. The Hyperactivity Index has been demonstrated to be an effective measure in the diagnosis of ADHD (Boyle & Jones, 1985; Satin, 1985). Behavioral ratings on the Conner's Parent Rating Scale-48 have been shown to be related to other established indicators of ADHD, such as physician ratings of medication response, the Diagnostic and Statistical Manual of Mental Disorders - Revised (APA, 1987) criteria for ADHD, and neuropsychological test scores (Arnold, Christopher, Huestis, & Smeltzer, 1985; Chelune, Ferguson, Koon, & Dickey, 1986).

There is a great deal of research demonstrating the ability of the Conners' Rating Scales to effectively discriminate between various diagnostic groups. Children diagnosed with ADHD have been discriminated from their normal peers (Homatidis & Konstantareas, 1981), from learning disabled boys and matched controls (Kazdin, Esveldt-Dawson, & Loar, 1983; Kuehne, Kehle, & McMahon, 1987), and from developmental reading disordered boys (Dalby, 1985).

Conners' Rating Scales have been used in a number of studies examining the relationships among family problems and child behavior problems. One scale showed that fathers' job dissatisfaction was related to specific child behaviors, particularly conduct problems and hyperactivity (Barling, 1986). Another was used as an indicator of psychosocial functioning in a study of children of alcoholic and
depressed fathers; these children were rated higher on behavior problems than those in a control group (Jacob & Leonard, 1986). Maternal depression has been demonstrated to be related to child externalizing behavior problems as measured by both the Conners' Parent Rating Scale and the Conners' Teachers Rating Scale (Schaughency & Lahey, 1985).

There is a general tendency for boys to score more pathologically than girls of the same age on most indices in the various forms of Conners' Rating Scales. These differences are also reflected in a greater prevalence rate of hyperactivity among boys than among girls (Trites et al., 1979). Overall scores suggest that ADHD girls, like ADHD boys, have short attention spans and poor concentration when compared to normals (Conners, 1989). However, unlike ADHD boys, ADHD girls do not tend to show an impulse response style, and tend to present fewer conduct problems in most situations (DeHaas & Young, 1984).

Procedure

After collecting the consent forms, couples (mothers and fathers of ADHD children from intact families) were mailed an envelope containing two packets of questionnaires, one marked "Father", the other marked "Mother"; a letter explaining the nature of the study and thanking them for their participation; and a self-addressed stamped return
envelope. Each packet for mothers and fathers contained directions and three questionnaires, the Dyadic Adjustment Scale (DAS: Spanier, 1976), the Conners Parent Rating Scales-48 (CPRS-48: Conners, 1973), the modified scale of the CPRS-48 to assess the degree of bother the child's behavior poses to the parent, a demographic questionnaire, and directions for completing the materials (See Apendix B). Subjects were reminded to complete all instruments independently. One week after the materials were mailed, a follow-up postcard was sent to all couples to further encourage participation.

As questionnaires were returned, the criteria for participation, including ages of ADHD children and the appropriate evaluation or diagnosis by a Licensed Practicing Psychologist or Medical Doctor, were checked in order to be included in the sample. A total of 79 couples were eligible for participation in the study.

After the study was completed, summaries of the results were mailed to all volunteers who completed a consent form and to coordinators of the participating CH.A.D.D. chapters. Donations for all completed forms received were sent to the appropriate chapters.

Data Analysis

To investigate, describe, and report relationships
among variables, Pearson Product Moment correlation coefficients were calculated for the following relationships: (1) interparent agreement on mothers' and fathers' perceptions of their ADHD children's behavior and self reports of marital satisfaction; (2) interparent agreement on parents' perceptions of their ADHD children's behavior and interparent agreement on the degree of bother their ADHD children's behavior poses to mothers and fathers; (3) mothers' self reports of marital satisfaction and fathers' self reports of marital satisfaction; (4) ratings of severity of child behavior for mothers and fathers; (5) interparent agreement and age of ADHD children; and (6) mothers' and fathers' self reports of marital satisfaction and age of ADHD children. Means and standard deviations were computed for the following variables: mothers' and fathers' marital satisfaction, interparent agreement on degree of bother, interparent agreement on perceptions of child behavior, and parents' ratings of severity of behavior for girls and boys.

Demographic information concerning the ADHD children and their mothers and fathers were tabulated to describe the sample. Comments from mothers and fathers regarding their feelings about the effects of their ADHD children on their marital relationship is included.
CHAPTER IV
RESULTS AND DISCUSSION

Presented in chapter IV are a description of the sample and the results of the analyses used to investigate the six research hypotheses presented in chapter I. An interpretation and discussion of the findings follow their presentation. Finally, limitations of the study are delineated.

Description of the Sample

The Conners Parent Rating Scale-48, the Dyadic Adjustment Scale, a scale modifying the CPRS-48 to assess the degree of bother the child's behavior presents to parents, and a demographic questionnaire were distributed to volunteers who completed a consent form. Of the 130 envelopes mailed (each containing individual packets for mothers and fathers), 83 were returned, and 77 couples qualified for participation. One returned packet had been completed by the mother only. Two couples had evaluated ADHD children not within the 6 to 16 age range. Two couples were in the process of having their children evaluated but results were incomplete. The number of usable completed packets of questionnaires was 154 (77 from mothers, 77 from fathers), which resulted in a 61% response rate.
ADHD Children's Demographics

The ADHD children evaluated in this study ranged from 6 years 2 months to 15 years 11 months old. There were 57 males and 20 females. The disparity between the number of males and females reflects the increased prevalence of ADHD in males (Barkley, 1987). All children had been evaluated by a Licensed Clinical Psychologist or Medical Doctor and had ADHD as their primary diagnosis. Forty percent of the children were identified as ADHD at the age of six; 22% at the age of seven.

Sixty-four percent of the children had certifiable Learning Disabilities in addition to ADHD, predominately in the areas of written expression, spelling, auditory processing, visual recall, short term memory, and fine motor and perceptual motor ability. Most ADHD children have primary attention deficits which affect school achievement, however, in most school systems, attention deficits are not acknowledged as LD.

Of the 77 ADHD children in the study, 74 were currently on stimulant medication commonly used to treat the symptoms of ADHD. Ritalin, by far, was the most widely used. Other medications used were Dexedrine, Cylert, Clonapine, and Imipramine, an antidepressant.

Twenty-four percent, or 19 of the children were adopted. The incidence of ADHD is four times higher in adopted children than in the general population, thus
explaining the large percentage of adopted children represented in this sample.

**Parent's Demographics**

Parents in this sample were between 29 and 50 years old. The length of marriage to each other ranged between 7 and 25 years, with a mean of 14 years. Twenty-three percent had one child, 58% had two children, 17% had three children, and 2% had four children.

Mothers and fathers were found to be a well educated group with 142 out of 154 of them, or 92%, reporting some college or more. Of that number, 73% had graduated from college.

An unusually high number of the couples, over 72%, reported a family income of $60,000 and above. Seventy-seven percent of mothers were employed outside the home between 20 and 40 hours.

Thirteen percent of the couples had another child with ADHD or a child they suspected to have ADHD. This points to recent findings that suggest a genetic influence in the etiology of ADHD. Several of the wives in this study commented that they believed their husbands were also ADHD. It would be interesting to include that question in future studies of ADHD children and their families.
Results

Research Hypothesis 1: Mothers and fathers will independently report marital satisfaction scores negatively correlated with their interparent agreement scores.

To investigate the relationships between mothers' marital satisfaction scores and their interparent agreement scores and between fathers' marital satisfaction scores and their interparent agreement scores, Pearson Product Moment correlation coefficients were computed. The resulting correlation reflecting the relationship between mothers' marital satisfaction scores and their interparent scores was \(-.61\) (\(N = 77\)) (see Note). The correlation between fathers' marital satisfaction scores and their interparent agreement scores was \(-.50\) (\(N = 77\)) (see Note). Such correlations are consistent with the researcher's predictions.

(Note: For analysis purposes only, the score used to indicate interparent agreement is actually a difference score. High interparent agreement is represented by a low difference score, and low interparent agreement is represented by a high difference score. Thus, for data analyses only, the computed correlations for interparent agreement are reversed.)
Research Hypothesis 2: Scores of interparent agreement regarding perceptions of the ADHD child's behavior will positively correlate with scores of interparent agreement regarding the degree of bother the child's behavior poses for them.

To address the prediction that interparent agreement on perceived severity of a child's behavior would reflect interparent agreement regarding the degree of bother resulting from the child's behavior, a Pearson Product Moment correlation coefficient was computed for the two variables. The resulting coefficient was .80 (N = 77). Table 1 shows the mean difference scores between parents for child behavior and the degree of bother such behavior poses to parents (see Table 1).

Research Hypothesis 3: Mothers and fathers of ADHD girls will have lower interparent agreement scores and will independently report greater marital satisfaction than mothers and fathers of ADHD boys.

To compare interparent agreement scores obtained by parents of ADHD girls with those obtained by parents of ADHD boys, means were computed for both groups. The resulting interparent agreement scores for parents of girls and for parents of boys were 30.50 (SD = 11.46, N = 40) and 34.33 (SD = 12.07, N = 114) respectively. These results reflect slightly lower disagreement between parents on perceptions
Table 1

Interparent Agreement Means (Difference Scores) for Child Behavior and Bother for ADHD Boys and Girls

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Behavior</th>
<th>Bother</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ADHD Children</td>
<td>33.34</td>
<td>38.00</td>
</tr>
<tr>
<td></td>
<td>SD = 12.00</td>
<td>SD = 15.08</td>
</tr>
<tr>
<td></td>
<td>R: 11 to 71</td>
<td>R: 4 to 76</td>
</tr>
<tr>
<td>ADHD Boys</td>
<td>34.33</td>
<td>38.24</td>
</tr>
<tr>
<td></td>
<td>SD = 12.08</td>
<td>SD = 14.51</td>
</tr>
<tr>
<td></td>
<td>R: 11 to 71</td>
<td>R: 4 to 69</td>
</tr>
<tr>
<td>ADHD Girls</td>
<td>30.50</td>
<td>37.32</td>
</tr>
<tr>
<td></td>
<td>SD = 11.46</td>
<td>SD = 16.79</td>
</tr>
<tr>
<td></td>
<td>R: 16 to 56</td>
<td>R: 19 to 76</td>
</tr>
</tbody>
</table>

Note.  R = Range.
of behavior exhibited by ADHD daughters than between parents of ADHD sons (see Table 1).

Turning to an examination of the difference between marital satisfaction scores reported by parents of ADHD girls and those reported by parents of ADHD boys, means for each group were computed. The resulting marital satisfaction scores for parents of girls and for parents of boys were respectively 108.28 (SD = 15.35, N = 40) and 105.54 (SD = 15.30, N = 114) indicating slightly higher marital satisfaction for parents of ADHD girls than for parents of ADHD boys (see Table 2).

Research Hypothesis 4: The ages of ADHD children will negatively correlate with scores of interparent agreement and will positively correlate with marital satisfaction scores.

Evaluating the relationship between age of the ADHD child and the interparent agreement scores obtained by parents, a Pearson Product Moment correlation coefficient was computed. The coefficient resulting from this analysis was -.19 reflecting a very slight negative relationship between child's age and parent's level of disagreement. That is, parents of older ADHD children tended to score only slightly lower on the interparent agreement scale with a low score indicating agreement and a high score indicating disagreement.
Table 2

Marital Satisfaction Mean for Mothers and Fathers of ADHD Boys and Girls

<table>
<thead>
<tr>
<th></th>
<th>Mother</th>
<th>Father</th>
<th>All Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All ADHD Children</strong></td>
<td>104.65</td>
<td>107.84</td>
<td>106.24</td>
</tr>
<tr>
<td>SD = 16.20</td>
<td>SD = 14.29</td>
<td>SD = 15.31</td>
<td></td>
</tr>
<tr>
<td>R: 52-131</td>
<td>R: 61-136</td>
<td>R: 52-136</td>
<td></td>
</tr>
<tr>
<td><strong>ADHD Boys</strong></td>
<td>103.86</td>
<td>107.21</td>
<td>105.53</td>
</tr>
<tr>
<td>SD = 16.01</td>
<td>SD = 14.51</td>
<td>SD = 15.30</td>
<td></td>
</tr>
<tr>
<td>R: 52-131</td>
<td>R: 61-136</td>
<td>R: 52-136</td>
<td></td>
</tr>
<tr>
<td><strong>ADHD Girls</strong></td>
<td>106.90</td>
<td>109.65</td>
<td>108.28</td>
</tr>
<tr>
<td>SD = 16.96</td>
<td>SD = 13.86</td>
<td>SD = 15.35</td>
<td></td>
</tr>
<tr>
<td>R: 71-130</td>
<td>R: 85-130</td>
<td>R: 71-130</td>
<td></td>
</tr>
</tbody>
</table>

*Note. R = Range.*
Similarly, only a slight positive correlation was found when Pearson Product Moment correlation coefficients were computed for age of child and marital satisfaction of mothers and fathers. The resulting coefficients were .17 for mothers and .12 for fathers.

The small magnitudes of these coefficients seem to dispute the prediction that the age of an ADHD child is related to interparent agreement on perceptions of the child's behavior and marital satisfaction as reported by parents.

Research Hypothesis 5: Scores of perceived severity of the ADHD child's behavior will negatively correlate with marital satisfaction scores as independently reported by mothers and fathers.

Again, Pearson Product Moment correlation coefficients were computed to investigate the predicted relationships between parents' reports of the severity of their children's behavior and their reported marital satisfaction. Mothers tended to report slightly higher marital satisfaction when reporting lower perceived severity of their children's behavior as shown by the resulting correlation coefficient of −.24 (N = 77). The same was found to be true for fathers with a correlation coefficient of −.25 (N = 77). The Pearson Product Moment correlation coefficient for mothers' and fathers' ratings of the severity of their ADHD
children's behavior was .36 (N = 77).

Research Hypothesis 6: Mothers will perceive their ADHD children's behavior as more severe and will report lower marital satisfaction than their spouses.

Examination of the predicted differences between mothers and fathers with regard to perceived severity of children's behavior and marital satisfaction required computation of these variable means for both mothers and fathers. The mean perceived severity of behavior score for mothers was found to be 41.72 (SD = 15.46, N = 77) and 39.23 (SD = 13.80, N = 77) for fathers. Table 3 shows the mean severity scores for mothers and fathers of boys and girls (see Table 3).

The difference between marital satisfaction means for mothers and fathers was also found to be slight, but in the predicted direction, with respective means of 104.65 (SD = 16.73, N = 77) and 107.84 (SD = 13.76, N = 77) (see Table 2).

Discussion

This study focused on the differences between mothers' and fathers' perceptions of their ADHD children's behavior and the relationship of these differences to mothers' and fathers' reports of marital satisfaction. Factors including
Table 3

Perceived Severity of Child Behavior Mean for Mothers and Fathers of ADHD Boys and Girls

<table>
<thead>
<tr>
<th></th>
<th>MSEV</th>
<th>FSEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ADHD Children</td>
<td>41.73</td>
<td>39.23</td>
</tr>
<tr>
<td></td>
<td>SD = 15.46</td>
<td>SD = 13.80</td>
</tr>
<tr>
<td></td>
<td>R: 7 to 77</td>
<td>R: 7 to 78</td>
</tr>
<tr>
<td>ADHD Boys</td>
<td>42.67</td>
<td>41.02</td>
</tr>
<tr>
<td></td>
<td>SD = 15.56</td>
<td>SD = 14.60</td>
</tr>
<tr>
<td></td>
<td>R: 7 to 77</td>
<td>R: 7 to 78</td>
</tr>
<tr>
<td>ADHD Girls</td>
<td>39.05</td>
<td>34.15</td>
</tr>
<tr>
<td></td>
<td>SD = 15.24</td>
<td>SD = 9.84</td>
</tr>
<tr>
<td></td>
<td>R: 7 to 62</td>
<td>R: 17 to 59</td>
</tr>
</tbody>
</table>

Note. R = Range.
age of the child, gender of the child, severity of the child's behavior, and the degree of bother such behavior poses to parents were also examined.

**Interparent Agreement on Perceptions of Child Behavior and Self Reports of Marital Satisfaction**

Consistent with previous research findings, the results of this study support the assumption that when parents do not agree about their child's behavior, additional concerns over discipline, expectations, and responsibility for the child are likely to cause dissatisfaction in the marriage (Barkley, 1981a; Block et al., 1981; Christensen et al., 1983). Mothers and fathers who described more differences in their perceptions of their ADHD child's behavior reported lower marital satisfaction than parents who described fewer differences in perceived child behavior. This was slightly higher for mothers than fathers. Barkley (1981a) noted marital discord in many families with ADHD children due to a discrepancy in child compliance for mothers and fathers. Fathers appear to obtain greater compliance from their children than do mothers. The result is that marital difficulties are quite likely to develop around child management issues. This was supported by parents' comments regarding the influence their ADHD children had on their marital relationships.

**ADHD Children's Affect on Parent's Marriage.** In response
to the open-ended question of whether or not mothers and fathers felt their ADHD children had affected their marriage, 94.8% answered affirmatively. Reasons cited most frequently were that ADHD children, because they tend to be demanding, unorganized, inattentive, and noncompliant, require constant attention which leaves little time and energy for parents to focus on their marriage. Many reported frequent disagreements with their spouses over child discipline, expectations, and responsibilities. Others felt that tension and conflicts with their ADHD children were carried over into their marital relationship.

Mothers, in particular, reported feeling stressed, exhausted, and emotionally drained. Many complained that the majority of child care and household responsibilities were left to them, often because of their husbands' work. Some felt their spouses travelled or became "workaholics" to avoid dealing with the tension and conflict at home. Several mothers had difficulty finding babysitters for their children. Others felt somewhat isolated at times because the unpredictable nature of their ADHD children's behavior prevented them from socializing more frequently with friends and their children and even with close relatives.

While also mentioning some of the same concerns as their wives, fathers tended to point to the extra financial demands in caring for ADHD children, including costs for follow-up evaluations and medical checks, medications,
tutoring, private schools, and therapy. Several were frustrated at the repetitious nature of hassles from one day to the next over supposedly routine matters such as getting ready for school on time, homework, chores, bedtime, and family mealtimes. Others admitted that they occasionally stayed late at work or travelled to avoid the stressful environment at home. One father expressed that "having an ADHD child in the home would even affect the Pope's marriage."

Positive comments were also found throughout the sample, more often from fathers than mothers. Despite the added stress ADHD children pose to their families, some parents believed that parenting an ADHD child had actually helped them strengthen their communication skills with one another concerning the child and other areas as well. An added benefit for these parents was their ability to work more effectively as a team, increasing their feelings of understanding and empathy for one another.

**Interparent Agreement on Perceptions and Degree of Bother**

Interparent agreement between mothers' and fathers' perceptions of their ADHD children's behavior was strongly related to interparent agreement between mothers' and fathers' reports on the degree of bother their children's behavior presented to them. This finding validates the argument that parental perceptions are a product of both the
child's behavior and the tolerance level of the parent (Ross, 1972). Thus, it appears that differences in parental perceptions of child behavior reflect reported differences in the degree of bother such behavior causes to each parent and vice versa.

**Effects of Gender on Interparent Agreement and Marital Satisfaction**

An examination of the effects of gender on interparent agreement on perceptions of child behavior and self reports of marital satisfaction showed that mothers and fathers of ADHD girls were in closer agreement on their daughters' behavior and reported slightly higher marital satisfaction than parents of ADHD boys. There are numerous studies that document the relationship between marital discord and boy's behavior problems rather than girls (Emery & O'Leary, 1982; Porter & O'Leary, 1980; Rutter, 1971). These studies suggest that ADHD boys respond differently to their parents commands depending on which parent gave the command. ADHD boys tended to engage in more negative and competing behaviors with their mothers than with their fathers (Tallmadge & Barkley, 1983). Of the few studies on ADHD girls, findings are inconclusive. Two suggested ADHD girls to have significantly less conduct problems than ADHD boys (Berry et al., 1986; DeHaas & Young, 1984): Another found no sex differences in ratings of child behavior problems between
ADHD girls and ADHD boys while finding greater marital discord among mothers of ADHD boys (Befera & Barkley, 1985).

**Effects of Age on Interparent Agreement and Marital Satisfaction**

The results of this study regarding the effects of age of the ADHD child did not support the prediction that age was related to interparent agreement on perceptions of child behavior. Likewise, a very weak positive relationship was found between age of ADHD child and marital satisfaction for mothers and fathers. In contrast to earlier findings that reported considerably more positive outcomes and higher remission rates for older ADHD children, recent follow-up studies have done much to dispel the notion that ADHD is typically outgrown by the adolescent years. These findings have consistently demonstrated that many ADHD children continue to display their symptoms to a significant degree throughout adolescence and young adulthood (Barkley et al., 1990; Brown & Borden, 1986; Thorley, 1984; Weiss & Hechtman, 1986). Several mothers in this study commented that their ADHD husbands showed symptoms of ADHD, as well.

**Severity of Child Behavior and Marital Satisfaction**

A number of investigators have indicated that there is a relationship between marital discord and the severity of child behavior problems (Emery & O'Leary, 1982; Frick et
The present study investigated a similar relationship using its sample of mothers and fathers of ADHD children, however, only a slight correlation was found. One reason the relationship between marital discord and the severity of ADHD children's behavior was weak in this particular study may be that 96% of the ADHD children in the sample were currently on medication to reduce the symptoms of inattention, impulsivity, overactivity, aggressive behavior, and noncompliance. Parent ratings of the severity of their ADHD children's behavior in this study focused only on child behaviors exhibited over the past month.

Limitations

One of the limitations of the study is that the results cannot be generalized to a larger population since the subjects were not randomly selected. Therefore, this sample is described simply by correlation coefficients and means. No statistical tests of significance were computed. Also, its small sample of well educated and high income families could not be generalized to larger populations.

Another limitation of the study is that there was no control group. A control group would have made the results much more meaningful in determining if parents of ADHD children differ from parents of normal children in their
marital satisfaction and interparent agreement of their children's behavior. However, in order to find matching controls of mothers and fathers of non-ADHD children, psychological testing and evaluation by a Licensed Practicing Psychologist of non-ADHD children and their siblings would have been necessary to insure there was no ADHD child in the family. Due to the scope of resources available to the researcher, this was not possible.

Finally, an overwhelming obstacle for all researchers is that there is virtually no way to control for all the variables that may affect marital satisfaction and family relationships. The complexity of human relationships defies statistical explanation. The intention of this researcher is to add a tiny piece of understanding to the enormous puzzle explaining human interactions in families that have ADHD children.
CHAPTER V

CONCLUSIONS

Summary

This study involved 77 couples consisting of mothers and fathers of ADHD children from intact, two-parent families. All parents were recruited from CH.A.D.D. (Children with Attention Deficit Disorder) support groups in Mecklenburg County, Forsyth County, Greensboro, and High Point, North Carolina. All ADHD children were between 6 and 16 years old and had been evaluated by a Licensed Practicing Psychologist or Medical Doctor. All mothers and fathers completed three questionnaires - the Conners Parent Rating Scales-48 (Conners, 1973), the Dyadic Adjustment Scale (Spanier, 1976), and a demographic questionnaire.

For purposes of this study, Bell's (1981) child effects model was used as a basis for research. This model, as opposed to an adult effects model, supports the thesis that children contribute to their own socialization by influencing the behavior of their caretakers. Thus, children are viewed as active agents who influence their social environments and interactions with adults. Recent research with ADHD children suggests that many of the difficulties these children and their families face are due primarily to child characteristics.
Recent research suggests that in most families of ADHD children, the primary contributors to parent-child interactive stress appear to emanate from child characteristics, with parental and environmental characteristics playing an important but secondary role (Barkley, 1981a, 1989; Bell & Harper, 1977; Mash & Johnson, 1990; Schachar et al., 1987). However, in examining these relationships it was important to note at the outset that the correlational nature of the investigation would not permit an assessment of the directionality of effects. In any case, the question of whether ADHD children produce marital disturbance, or vice versa, did not lessen the need to investigate, describe, and report the influences of ADHD children on the parent-child relationship and the marital relationship.

The literature supports the investigation of the relationship between interparent agreement on the perceptions of their ADHD children's behavior and self reports of marital satisfaction with regards to the variables of age of the child, gender of the child, severity of the child's behavior, and gender of the parent. As predicted, moderate relationships were found between interparent agreement on child behavior and mothers' and fathers' reports of marital satisfaction, although somewhat higher for mothers. The predicted effects of age of the child and rated severity of child behavior were not
supported. When assessing the effects of gender of the child, parents of ADHD girls reported slightly more agreement and higher marital satisfaction than parents of ADHD boys. Examination of the predicted differences between mothers and fathers showed that mothers perceived their ADHD children's behavior as slightly more severe and reported slightly lower marital satisfaction than did fathers of ADHD children.

A final hypothesis investigated the relationship between interparent agreement on perceptions of ADHD children's behavior and interparent agreement on the degree of bother such behavior posed to parents. The two variables were strongly correlated.

For analysis purposes only, an interparent agreement score was indicated by a difference score computed by adding the numerical differences between mothers' and fathers' responses for each item on the CPRS-48 (Conners, 1973). Thus, high interparent agreement was indicated by a low interparent agreement score, or a low difference score, and low interparent agreement was indicated by a high interparent agreement score, or a high difference score.

Implications for Marriage and Family Therapists

The information provided by the results of this study can be useful to marriage and family therapists in helping
families of ADHD children. The findings emphasize the necessity of educating parents of ADHD children about the nature of the disorder and the possible effects these children can have on the marital relationship and on the parent-child relationship. Fostering a better understanding and acceptance of ADHD children by their parents can alleviate much of the stress and tension commonly found in families of these children. Each spouse needs to learn to appreciate the other and to value the important, special role each has to the child.

All human beings are influenced by forces which determine behavior. These forces fall into two groups: there are the forces of nature - the child's inherited, constitutional, and physical traits and there are the forces of nurture - the environment in which one lives and grows. Students of human behavior have heatedly debated which of these two forces are most important in determining what a person is and does. In reality, however, no conflict exists between these forces. It is now accepted that both nature and nurture are important. Inherited abilities and temperamental characteristics interact with the child's environment so that both nature and nurture, and the interaction between the two, determine the final product - that is, the character of the child and the adult he or she becomes.

What parents do to and for their children and how they
treat their children does make a difference. However, the whole weight does not rest on their shoulders. Parents are molding forces already at work in their children as early as when he or she was first placed in their arms in the delivery room. With the ADHD child, nature has handed parents a bonus: Parents can know that ADHD is a part of the child's nature. It is a physical component of the child's neurological make-up. Thus, the behaviors of ADHD children which routinely cause stress and tension in the family - impulsivity, overactivity, inattention, and poor organization - are behaviors which spring from their being; they are not deliberate or conscious actions on their part.

When therapists become more knowledgeable about the nature of ADHD and the possible risks an ADHD child presents to relationships in his or her family, they can help parents to become more objective and compassionate in their interactions with their children and more empathic in their interactions with their spouses. Together, mothers and fathers can learn to set more realistic expectations for their ADHD children and to share their concerns openly with one another as a team. Therapists need to know that failure of parents to make this adjustment can pose threats to their marital well-being.

Although there are an abundance of research findings supporting the relationship between marital discord and child behavior problems, there are few studies with ADHD
children and their parents. Further research is indicated, and the results of this study provide a foundation for such research.

Recommendations

The significance of this study is that it examines parental perceptions of child behavior and self reports of marital satisfaction by means of standardized measures completed by mothers and fathers of ADHD children. This research joins the existing literature in supporting a relationship between child behavior problems and marital discord.

For the researcher, these data suggest a need for further research with larger, more diverse populations and matched non-ADHD groups which carefully analyze the nature of the reciprocal influences within the parent-child relationship and the marital relationship. Ideally, marital assessment and parental perceptions of child behavior need to be measured upon intake and followed longitudinally to examine the effects of medication and parent, child, and marital adjustment. Such an approach strongly supports the importance of the family system, the importance of including fathers of ADHD children in designing treatment programs, and the importance of early intervention.

These findings suggest that there is an important need
to develop multifaceted parent training programs that not only teach more positive parenting skills but also incorporate stress management and interpersonal relational skills, as well as social support for these families at risk. Parents of ADHD children need to be informed as to how their interpersonal conflicts can lead to negative effects for ADHD children and, likewise, how ADHD children can potentially disrupt their marital relationship.
References


Dear Parent,

I am a doctoral student in Marriage and Family Therapy at Virginia Tech and the mother of a 13 year old son with ADHD. I am conducting a research project about relationships in families of ADHD children. In particular, this study focuses on the unique relationships between you, your spouse, and your ADHD child.

You and your spouse will be asked to complete three questionnaires independently, which will come to you by mail in individual packets - one for "mother", one for "father". It should take you approximately 20 minutes to complete all questionnaires. Please try to return the completed forms to me within 48 hours upon receipt in the accompanying self-addressed stamped envelope.

Your participation in this study is voluntary and confidential. All information will be anonymous. In return for your time and effort, a donation of $3.00 will be made to your C.H.A.D.D. chapter for each pair (mother's and father's) of completed questionnaires that are returned to me. The results of this study will be shared with you upon its completion.

Please complete the attached consent form with your name and address so I can send your packets to you as soon as possible.

Thank you for your participation.

Sincerely,

Catharine A. Hill

815 Dover Road
Greensboro, NC 27408
Consent Form

YES - Send a packet of materials for my spouse and I to complete. We understand that a donation of $3.00 will be made to CH.A.D.D. of Mecklenburg County for our completed pair (mother's and father's) of questionnaires that you receive. It is understood that all information will be kept confidential and anonymous. We are willing to participate in this study.

Parent's Name ________________________________

Address_______________________________________

City______________________ Zip Code____________

____ Yes, I would like to know about the results of the study.
Appendix B
1. Age of ADHD child you are evaluating ____________

2. Your age__________

3. What is the highest level of education you received? (circle number to correspond with the highest year of education completed)
   under 12, 12, 13, 14, 15, 16, 17, over 17

4. What was your approximate family income before taxes in 1991? (circle number)
   (1) Less than 19,999
   (2) 20,000 to 29,999
   (3) 30,000 to 39,999
   (4) 40,000 to 49,999
   (5) 50,000 to 59,999
   (6) 60,000 and above

5. Do you feel that having an ADHD child has affected your marriage in any way? Yes_______ No_______
   If "Yes", in what ways? Please explain. ________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
PARENT QUESTIONNAIRE FOR MOTHERS

Please answer the following questions about your child whom you will be evaluating for this research.

1. Age (in years and months) _______ years and _______ months

2. Gender: Male _____ Female _____

3. How old was your child when he or she was diagnosed as having ADHD? ________________

4. Was your child evaluated by a Licensed Clinical Psychologist or Medical Doctor? Yes _____ No _____
   If "No", who did the evaluation or made the diagnosis? ________________________________

5. Does your child have any additional concerns, other than those related to ADHD, such as:
   (circle those that apply and specify the nature of the problem)

   (1) Learning Disabilities________________________

   (2) Emotional Problems__________________________

   (3) Physical Problems____________________________

   (4) Medical Problems_____________________________

   (5) None
6. Is your child on medication for ADHD? Yes__ No__
Name of medication? (circle number or fill in name)

(1) Ritalin
(2) Cylert
(3) Dexedrine
(4) Other____________________

Please answer the following questions about yourself and your family:

1. Your age________

2. What is the highest level of education you received?
   (circle number to correspond with the highest year of education completed)
   under 12, 12, 13, 14, 15, 16, 17, over 17

3. Length of current marriage? ___________________________
   Number of children produced by current marriage?______

4. Are you and your spouse the natural biological parents of the ADHD child you are evaluating for this research? Yes____ No____
   If "No": (circle number below that explains)

   (1) Child adopted in current marriage
   (2) Child adopted by you in former marriage
   (3) Child adopted by spouse in former marriage
   (4) Child born by you in former marriage
   (5) Child born to spouse in former marriage
5. Do any of the other children in your family have:
   (circle appropriate numbers and give age of the child)
   
   (1) ADHD ____________________________
   (2) Learning Disabilities______________________
   (3) Emotional Problems_______________________
   (4) Physical Problems_______________________
   (5) Medical Problems_______________________
   (6) None

6. Do you work outside the home? Yes____ No____
   If "Yes", approximately how many hours per week?_____

7. Do you feel that having an ADHD child has affected your
   marriage in any way? Yes____ No____
   If "Yes", in what ways? Please explain._____________________
   ___________________________________________________
   ___________________________________________________
   ___________________________________________________
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