PARENTING STRESS: A COMPARISON OF MOTHERS AND FATHERS OF DISABLED AND NON-DISABLED CHILDREN

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This study compared perceived levels of parenting stress between mothers and fathers of children with Attention-Deficit Hyperactivity Disorder (ADHD), children with developmental disabilities, and normally developing children. The relationship of certain demographic variables, such as Socio-economic Status (SES), number of children, years married, parent age, and child age, as well as social support with parenting stress was also examined for mothers and fathers of these three groups. Identification of factors related to parenting stress in fathers was of particular importance for this study, as fathers are often an underrepresented group within parenting research. Identifying effective methods for predicting high levels of parenting stress is important, as stress has been linked to psychological well-being, potential for abuse, and a greater likelihood of poor adjustment for both parent and child.

Results from the present study comparing reported stress levels between groups of parents were supportive of previous studies indicating that parents of children with ADHD and developmentally disabilities experience significantly greater parenting stress, specifically with respect to child characteristics. Significant gender differences were also found between mothers and fathers in terms of parent characteristics related to stress. Fathers reported greater stress in the areas of attachment, while mothers reported more parent role restrictions. Additionally, significant negative relationships were found between parents' perceived helpfulness of informal social support and parenting stress

scores in both mothers and fathers, affirming positive effects of social support on stress. Helpfulness of informal social support was also significantly predictive of parenting stress in both mothers and fathers across both the child and parent domains of the PSI, although, it had more predictive power with regard to parent related contributors to parenting stress. Family demographic factors, including age of the child and SES demonstrated some predictive power of parenting stress in mothers. Mothers with younger children and lower SES were more likely to report greater parenting stress. Implications of these results and future directions for research are also discussed.

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

"Becoming a parent is one of the most significant family life cycle transitions." (Pittman, Wright, & Lloyd, 1989, p. 267)

"Parenting any child can at times be a stressful experience." (Cameron, Dobson, & Day, 1991, p. 14)

General Overview

The purpose of this study was to investigate several factors reported to be related to or predictive of parenting stress. Such factors included aspects of the child's functioning and/or presence of a disability, gender of the parent, characteristics of the family (i.e. Socio-economic Status (SES), number of children, years married, age of the parents and age of the child), as well as aspects of the parents' social support network. This study investigated the relationship of such variables to parent stress reports of mothers and fathers of children with ADHD, developmental disabilities, and normally developing children. Many researchers of parenting stress have discussed or alluded to the importance of some of these variables with respect to parenting stress (Baker, 1994; Barkely, 1990; Beckman, 1991; Dumas, Wolf, Fisman & Culligan, 1991). However, simultaneous investigation of the aforementioned variables and characteristics is sparse.

The following can be expected in the review that follows. First, given the multitude of measurements of parenting stress, the concept of stress and more specifically, parenting stress will be discussed. The possible negative effects of parenting stress on children and families will then be explored. Next, child related variables to

parenting stress, such as disability status of the child will be reviewed. A significant portion of parent related variables will discuss the importance of including fathers in parenting research and their role in society and the family. Movements toward inclusion of fathers in parenting research will be presented, as will a review of the comparison of mothers and fathers in the parenting stress literature. Investigation of other family and environmental factors influencing parenting stress, including SES and social support will then be discussed. Furthermore, the relationship between parental role identity and parenting stress will also be explored, and will be followed by a summary and rationale for this study. The introduction will close with research questions and related hypotheses for the present investigation.

The Concept of Stress

Lazarus and Folkman (1984) define psychological stress as "a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being." (p.19). Folkman (1984) describes this relationship between the person and environment as dynamic, bi-directional, and mutually reciprocal. Furthermore, one's cognitive appraisal of the situation and coping methods utilized influence the degree of stress experienced by the person. Lazarus and Folkman (1984) also describe a complex process of evaluating or appraising a stressful situation and the available coping options and resources to determine whether the resources will be adequate for coping with the demands of the stressor. Other researchers including Noppe, Noppe, and Hughes (1990) note that stress itself can be seen as a component of personality (i.e. trait variable), related to situational

factors (i.e. state variable), or as related to attitudinal variables such as interpersonal attributions and locus of control.

Lazarus and Folkman (1984) note that personal characteristics and environmental factors influence the appraisal of the person-environment relationship. Examples of personal characteristics are one's type of motivation (i.e. goals and values), beliefs about the individual and the world, and recognition of one's personal resources for coping (i.e. problem-solving skills, finances, social skills and level of health and energy). Differences in these personal characteristics can help to explain why individuals evaluate similar stressful encounters differently. Environmental factors include the proximity and nature of the danger, its ambiguity and duration, as well as the availability and quality of social support resources.

The Concept of Parenting Stress

Given this general conceptual model of stress, researchers have sought to provide a useful conceptualization for a particular type of stress, parenting stress. One of the more widely used indices of parenting stress is the Parenting Stress Index (PSI), (Abidin, 1995), which provides a useful conceptualization for parenting stress. Abidin acknowledges the assumption that stressors are multi-dimensional both in source and kind. He notes that this assumption led to the identification of three major source domains of stressors for parents: 1) Child Characteristics; 2) Parent Characteristics, and 3) Situational/Demographic-Life Stress. Child characteristics include factors such as the child's adaptability, demandingness, and level of hyperactivity. Some characteristics of the parent include level of depression, attachment to the child, sense of competence as a

parent, and relationship with the spouse. Situational life stress includes events such as changing jobs, moving, marriage, divorce, or death of a family member. Abidin (1995) further describes the identified kinds of stressors as ranging from objective life events such as a death in the family, to the parent's judgement of the child's activity level or subjective feelings of fulfilling the parent role. He also comments that based on his experiences of working with parents, he considers the emotional interpretation of situations by parents to be just as important as the objective events or characteristics of the children with regard to the experience of parenting stress.

As evidenced above, evaluating parenting stress may be somewhat complicated in that there are potentially several components to consider based on interactions of child, parent, and environmental variables. Additionally, there is great emphasis put on the subjective perception of stress. As a result, there has been great variability in how researchers have chosen to operationalize the construct of parenting stress (Anastopoulos, Guevremont, Shelton & DuPaul, 1992), which has made it difficult in some cases to make cross-study comparisons.

Lavee, Sharlin, & Katz (1996) discuss several forms of parenting and family stress that are the result of various stressful life events. These authors discuss normative events, such as the empty nest situation or retirement, that predictably occur in the course of the life cycle as opposed to non-normative events, which include the death of a child or natural disaster; both of which are commonly referred to in the literature. They go on to describe a third form of parental stress, one that is marked by ongoing role strains and intra-family problems. It has been identified in part as the accumulation of demands with

which the parents must cope. There are several aspects, however, of both the child and the parent that could exacerbate this perception of stress in the parenting role, and are likely contributing factors to greater levels of perceived parenting stress.

Parenting Stress and its Influence on Parental Functioning and the Family

Parenting stress has been linked with negative aspects of parental and family functioning in both families of children with and without disabilities, which underscores the importance of investigating this type of stress. For instance, Belsky (1984) proposes that there are three major determinants of parental functioning: the parents' own psychological resources, the characteristics of the child, and contextual sources of stress and support. A growing body of literature supports the notion that stress affects the process of parenting (Creasy & Jarvis, 1994; Feldman, 1987; Noppe, Noppe, & Hughes, 1990; Rodriguez & Murphy, 1997), although, the particular definition of stress and the time at which it is measured can influence the outcomes of such literature. Specifically, research has demonstrated that parenting stress, in particular, may have a negative effect on the child's developmental functioning (Creasey & Jarvis, 1994), on the quality of parent-child interactions (Noppe et al., 1990), the quality of the marriage (Lavee, Sharlin, & Katz, 1996), and the parents' potential for child abuse (Rodriguez & Murphy, 1997).

Creasey and Jarvis (1994) proposed that increased perceptions of stress associated with both child and parental functioning would have a negative influence on the behavioral development of the child. The authors measured parenting stress in parents of non-clinic referred two-year-olds using the Parenting Stress Index. Parents who reported that their child exhibited more behavior problems, particularly of the externalizing type,

perceived greater parental stress associated with child characteristics. Father perceptions of child related stress were associated with increased perceptions of externalizing and total behavior problems, but none of the other objective measures used by the authors to measure aspects of developmental functioning. The mothers, however, who perceived more child related stress, not only perceived more externalizing and total behavior problems, but also had children who exhibited less self-assertion and pretend play during home observations. The authors suggest that mothers appeared to be more sensitive to overt child behavior problems, as well as to other factors that could be associated with possible developmental delay. Despite the authors not finding a direct relationship between father adjustment and toddler functioning, they did demonstrate a relationship between father's adjustment and perceptions of stress with respect to the toddler's behavior.

Another similar study which investigated the effects of parenting stress with normally developing children on the parents' psychological well-being and the quality of the marital relationship was conducted by Lavee et al. (1996). These researchers examined the effects of raising normal children on levels of parenting stress, as well as the parents' perceptions of the quality of their marriages through the use of structural equation models. Parenting stress was measured based on the respondents' experiences as parents and how strongly they identified common parenting experiences with a variety of adjectives. Psychological well-being was measured through the use of descriptors ranging from feelings of being healthy, strong, and confident to feelings of loneliness and despair. The authors reported several interesting findings from their study. In particular, they

discovered that parenting stress appeared to be a significant factor on several variables of family functioning. It was strongly associated with both mothers' and fathers' psychological well-being and seemed to have a significant negative effect on their marriages. Additionally, of the factors studied in Lavee et al.'s research, parenting stress was reported to have the greatest influence on the quality of the marriage.

In addition to child development, parents' psychological well-being, and marital quality, some researchers have also investigated the relationship of parenting stress to parent's potential for child abuse. Abusive parenting behavior and reports of abusive potential have consistently been associated with parenting stress (Rodriguez & Murphy, 1997; Webster & Stratton, 1988). Rodriguez and Murphy (1997) investigated a sample of low-income African-American maternal care-givers who had children with varying degrees of developmental disabilities. Results indicated significant relationships between parents' stress scores on the child and parent domains of the PSI and their scores on the Child Abuse Potential Inventory (CAPI).

Some researchers have gone as far as to investigate the effects of parenting stress vulnerability and expectancy on mothers and fathers to be. Noppe and colleagues, (1990), for instance, compared expectant mothers and fathers using measures of stress vulnerability, parenting stress expectancy, and attributions of power in parent-infant interactions. The authors were interested in predicting responses of the parents to their infants. Results indicated that the prenatal stress variables were better able to predict future father-infant interactions than mother-infant interactions. In particular, power attributions in father-infant interactions and negative expectations during the prenatal

period appear to affect a father's behavior toward their infants. Fathers who attributed high power in parent-infant interactions to themselves were more positive prenatally about parenting and those who were relatively lower on stress vulnerability were more likely to take care of their infants' basic needs. Understanding more specifically the factors that effect parenting stress even before the child is born can ultimately serve to help prevent or alleviate the negative effects that such stress may have on the child's development, and the family's interactions and functioning as a whole.

Parenting Stress and Child Disability

There are a variety of factors for which parenting stress has been found to be mediated by; including such factors as social support (Crnic & Greenberg, 1987; Krauss, 1993), age of the child (Bristol, 1979), and whether or not the child is physically handicapped, hyperactive, or non-disabled (Dumas, Wolf, Fisman, & Culligan 1991; Mash and Johnston, 1983). Of the variety of factors, however, there has been general agreement on the significant effect of child functioning on parenting stress. Child characteristics such as type of disability, unusual care-giving demands, and difficult behavior may exacerbate stress (Gallagher, Beckman, & Cross, 1983). As child characteristics vary among children with and without disabilities, so do parenting stress reports among parents of these different groups of children.

Parenting Stress in Families of Children with Disabilities

Review of the literature on parenting stress shows that most studies have focused on the effect of having children with particular disabilities or disorders, such as autism, Down's syndrome, learning and behavior disorders, or physical disabilities (Baker, 1994;

Baker & McCal, 1995; Dumas, Wolf, Fisman, & Culligan, 1991; Kobe & Hammer, 1994). Other studies in this area have suggested that the stress resulting from parenting difficult children is associated with parents' psychological distress (Wolf, Noh, Fisman, & Speechley, 1989), life satisfaction (Milgram & Atzil, 1988), and marital relationship (Fischer, 1990). In reviewing the related literature on parenting stress for parents of children with disabilities, Fischer (1990) concluded that research looking at parent-child interaction patterns is more indicative of a child-to-adult direction of effect with regard to parenting stress, more so than the reverse. This would seem to suggest that the more problematic or difficult the child is to manage, the greater the likelihood of experiencing parenting stress. One of the most widely studied childhood problems in terms of parenting stress is that of children with ADHD.

Parenting Stress and Children with ADHD

There have been several studies during this past decade that have examined the relationship between children with ADHD and parenting stress in parents of these children. ADHD is a chronic and pervasive condition that is characterized by developmental deficiencies in sustaining attention, controlling one's impulses, and regulating one's motor activity in response to situational demands (American Psychiatric Association, 1994). Barkley (1998) notes that ADHD often adversely affects many areas of child psychosocial functioning and can be highly disruptive. Anastopoulos et al. (1992) state that although a direct causal connection has not yet been firmly established, there is correlational evidence indicating that ADHD influences far more than child functioning. One such robust finding in the research literature on ADHD, is the extremely high level

of stress experienced by parents of children with ADHD (Baker & McCal 1995; Breen & Barkley, 1988; 1990, Mash & Johnston, 1983). Researchers (Breen & Barkley, 1988; Dumas et al., 1991; Mash & Johnston, 1983) have also concluded that parenting stress in parents of ADHD children is much greater than that found in parents of normal controls.

Child characteristics appear to be the greatest mediator of stress in parents of children with ADHD. Specifically, externalizing behavior problems such as aggression, hyperactivity, and impulsivity contribute most to parenting stress (Dumas et al. 1991; Mash and Johnston, 1983). Dumas et al, (1991) found that parents of children with autism and behavior disorders reported significantly higher levels of parenting stress than parents of children with Down Syndrome or with normal development. However**,** parents of children with behavior disorders were the only ones to report that their children presented difficulties that were statistically and clinically greater in number and intensity than parents from the other three groups.

Fischer (1990), in summarizing the research on reported stress in parents of children with ADHD concluded that the research has focused almost exclusively on maternal stress. Including fathers in research examining parenting stress and ADHD recognizes the importance of fathers in the family system, and can be used as a method to gain information about family functioning in general as well as guidance for future research and intervention (Baker, 1994). Anastopolous et al. (1992) note that their study was limited because of the absence of father reports on parenting stress, and as a result limited the conclusions that could be drawn from their sample.

Anastopoulos et al. (1992) examined the degree to which parenting stress was related not only to the child's ADHD, but also to various other child, parent, and family-environment variables using a series of multiple-regression analyses based on multiple method assessments. The authors state that based on previous research it is still unclear exactly whether the stress emanates directly from the child's ADHD, but that clinical experience would suggest that it is likely to, given the increased care-taking responsibilities that children with ADHD place upon their parents.

As hypothesized, Anastopoulos and his colleagues found that based on stepwise multiple-regression analyses, child and parent variables alone accounted for far more of the variance in overall parenting stress than did family environment variables. When hierarchical regression analyses were done, a similar pattern of findings emerged which resulted in a combination model for explaining slightly over half of the variance in adjusted PSI scores. There were five significant predictors in the model, three of which consisted of child variables (i.e. the CBCL Aggressive T score, the ADHD total severity score, and the child's health status). Essentially, higher levels of parenting stress were related to more frequent aggressive behavior, more severe ADHD symptoms, and a greater number of child health problems. These findings highlight the importance of further investigating and differentiating specific child characteristics that are likely to influence levels of parenting stress, including diagnostic categorization of the child.

Parenting Stress and Children with Developmental Disabilities

As with ADHD, there have been numerous studies investigating the relationship between having a child with developmental disabilities and parenting stress. Results have

been mixed in this area. Cameron, Dobson, and Day (1991) compared stress in parents of developmentally delayed and non-delayed preschool children. Due to a low response rate from fathers, their sample consisted primarily of mothers. They reported statistically significant differences between the two groups of mothers' scores on the Child Domain of the PSI. In particular, the level of demandingness and distractibility of developmentally delayed children was reported by mothers to be significantly greater compared to the non-delayed children. Cameron et al. (1991) note that one of the limitations of the existing research on parenting stress is that it has only focused on stress in parents whose children have an identified disability or handicap.

Interestingly, Cameron et al's research showed that mothers of developmentally delayed children scored similarly on the Parent Domain of the PSI as compared to mothers of non-delayed children. This suggests that mothers of the delayed children were no more depressed, equally as attached to their children, had similar restrictions on their parenting role, and felt equally as competent and healthy.

Beckman (1991) found significant differences between parents of disabled and non-disabled children on measures of parenting stress. Her hypothesis that parents of children with disabilities would report greater stress as compared to parents of normally developing children was confirmed across all domains of the PSI. The children with disabilities were all moderately to severely delayed, but were heterogeneous with respect to type of disability. Disabilities included cerebral palsy, autism, multiple disabilities, genetic disorders resulting in developmental delay, and general delays of unknown origin. Despite overall elevated levels of parenting stress for the parents of disabled children,

parents of both groups did report similar degrees of attachment toward their child, acceptability of their child, and reinforcement from their child. It should also be noted that there was a large amount of variability in stress scores within the group of families who had children with disabilities. This in part signifies the importance of acknowledging individual differences in the perceptions of parents, while being aware that parents may experience additional pressures related to raising a child who has disabilities.

Dumas et al's 1991 study comparing parents of children with behavior disorders, autism, Down Syndrome and normally developing children revealed significant differences in parenting stress between parents of children with behavior disorders and autism as compared to parents of children with Down Syndrome and normal development. These differences suggest that the type of developmental disability may affect parents' perceptions of stress, and should be considered in such investigations.

Parenting Stress and Children without Disabilities

Despite the abundance of research focusing on and linking parenting stress to families of children with disabilities, Cameron et al. (1991) state that "parenting any child can at times be a stressful experience" (p. 14). They conclude that the use of control groups in parenting stress research will enable researchers to determine which sources of stress may differ among parents from both of these groups, thus allowing for more specific interventions. Most research investigating parenting stress among parents of normally developing children has been in contrast to parenting stress in families with disabled children. In general, parents of non-disabled children report less parenting stress, although the specific child and parent characteristics that contribute to parenting stress

vary among these studies. As mentioned earlier, Beckman (1991) revealed significant group differences between parents of developmentally disabled and non-disabled children on both the child and parent domains of the PSI. However, parents of normal children reported similar experiences of stress with respect to how reinforcing and acceptable (Child Domain) their children were to them, and felt similar levels of attachment to their children (Parent Domain). Cameron et al. (1991) only found significant differences between parents of developmentally delayed and non-delayed children with respect to child related stress in the areas of acceptability, demandingness, and distractibility. In contrast to Beckman's 1991 study, these researchers discovered that parents of non-delayed children reported similar experiences of stress with regard to all of the parent characteristics tapped into by the Parent Domain, and also in the area of general life stress. Baker and McCal (1995) looked at parenting stress scores in mothers of ADHD, learning disabled and non-referred children. Results showed that ADHD parents reported greater child-related stress than parents of learning disabled and non-referred children. Mothers of the learning disabled group reported significantly greater child-related stress than parents of non-referred children. There were no significant differences between the three groups of parents, however, on the Parent Domain of the PSI. In sum, the bulk of evidence seems to suggest that parents of normally developing children tend to report lower levels of stress with respect to child characteristics as compared to their cohorts with disabled children. In contrast, these differences become less or non-existent when parent characteristics contributing to parenting stress are compared.

One study that investigated only parents of normally developing children was conducted by Lavee et al. (1996), who studied variables related to parenting stress in these families. These authors highlighted a particular source of stress, that of ongoing role strains and intra-family problems that can lead to an abundance of demands with which families must manage. The authors described this source of stress as persistent role problems that are not events defined by a discrete onset in time, but rather appear insidiously and become relatively fixed and ongoing in daily role experiences. These authors discovered that parents of normally developing children are susceptible to parenting stress, which in turn was reported to have significant negative effects on the parents' psychological functioning and quality of the marital relationship.

Parenting Stress and Parent Gender

Importance of Including Fathers in Parenting Research

The traditional role of mother is familiar, and the influence of maternal behavior on young children including the influence of children's behavior on mothers is well researched. Knowledge, however, of the comparable role of the father and paternal influences on children's development as well as the child's influence on fatherhood is relatively limited. Father's contributions are often forgotten in the research literature (Lamb, 1975) and particularly father's roles with children of abnormal development (Phares, 1996). Not until recently has there been a call among researchers toward investigating aspects of the parenting role of fathers. Such a call may have been prompted by statistics that illustrate an increased demand for including fathers in more of the daily tasks and demands of parenting.

The Role of Father in Society

Phares, in her 1996 book on fathers makes an interesting point about the popular view of fathers in recent history. She discusses a popular TV show entitled "Dinosaurs" which was created by Jim Henson's production company. The infant dinosaur on the show refers to its father as, "Not the momma." Phares describes this reference as meaningful with respect to fatherhood, and emphasizes how it reflects fathers' somewhat secondary status to mother as primary parent. She adds that the name implies that the father serves some sort of parental role that is defined mostly by what he is not as opposed to what he is.

Despite this popular perception of dad, the 1970's included a new emphasis on the changing role of fathers in American society (Lamb, 1975). McBride (1991) noted a shift in societal standards and expectations toward encouraging fathers' participation in raising children. Chira (1993) discusses some of the factors related to increased expectations and enabling fathers to participate more fully in the raising of their children. Such factors included an increased number of mothers working outside the home coupled with an increase in paternal unemployment, as well as the rising cost of child care and parents' ability to work night shifts or part-time. A shift in societal attitudes has also been credited with aiding fathers' transition toward increased parenting responsibility.

Robinson and Barrett (1986) also describe the changing role of fatherhood as one in which fathers are considered more nurturing toward their children and are considered to be more actively involved in parenting and household responsibilities. It is important to consider the variety of experiences that fathers may encounter, including parenting stress,

as a result of these changing and relatively new found roles. Levant (1988) suggests that many fathers are finding themselves ill prepared to take on an active parenting role. Similarly, LaRossa (1988) describes a situation in which the "culture" of fatherhood places increased expectations for fathers to be more involved with their children, while the "conduct" of fatherhood does not actually meet those expectations. The author suggests that this discrepancy can produce negative consequences for fathers, such as marital conflict within the family, feelings of ambivalence, and increased levels of perceived stress with respect to parenting. There has been a fair amount of research focusing on some of the deleterious effects of parenting on mothers, who are generally considered to have greater involvement or responsibilities in parenting tasks and demands. Greater maternal involvement has been associated with higher levels of maternal depression and anxiety (Lampert & Friedman, 1992). As with mothers, it will be important to identify the effect of increased involvement in daily parenting tasks and responsibilities on fathers' functioning. Furthermore, gaining a better understanding of the specific factors associated with increased levels of parenting stress in fathers will be particularly relevant to this study, given the heightened expectations for father participation in parenting. Additional support for investigating parenting stress in fathers as well as mothers stems from evidence suggesting that fathers play a special role in parenting.

Fathers' Unique Roles within the Parenting Dyad

There is research that suggests fathers may provide several unique and distinct parenting roles when compared to mothers. Based on findings of these distinct roles, it

will be important to identify factors that may be contributing to perceptions of high levels of parenting stress, and which may be disrupting or prohibiting fathers from effectively fulfilling their unique roles. Some of the roles provided by fathers appear to influence the positive development of children, including enhanced sibling and peer interactions.

Volling and Belsky (1992) conducted an extensive six- year longitudinal study comparing mother-child and father-child interaction patterns as they related to the quality of sibling interactions. The authors discuss the importance of research pertaining to the role that fathers serve in the development of sibling and peer relationships, which may be quite distinct from that of the mother. Results from their study indicate that aspects of the father-child relationship were related to pro-social behavior between siblings, whereas certain aspects of the mother-child relationship were more predictive of sibling conflict.

The authors employed a multi-modal approach to assessing the parent-child and sibling interactions, including in home and laboratory observations, and questionnaires on differential parental treatment. In particular, they reported that sibling conflict was greater when (1) the firstborn child had an insecure infant attachment to the mother, (2) when the mother had been intrusive with the older sibling in a teaching task at 3 years, and (3) when there was greater conflict occurring between the mother and both siblings during home observations at six years. In contrast, prosocial sibling interaction tended to be more frequent if (1) the fathers were more facilitative with the older child during free play at 3 years, and (2) when fathers reported more affection for the older child relative to the younger child at 6 years, based on the questionnaire of differential treatment. In this study the predictive utility of the father-child relationship became more apparent by the time the

oldest child was 3 years of age. Specifically, sibling interaction at 6 years was more pro-social if fathers had been observed to be more facilitative and positively affectionate in their interactions with the firstborn child at 3 years, than if they had been intrusive or uninvolved.

Volling and Belsky also discuss the importance of pro-social behavior between siblings as it relates to healthy social interactions outside of the home. Their findings are consistent with other research documenting the role of playfully affectionate father-child relationships and peer relationships. Parke et al. (1989) theorize that young children may be learning the ability to recognize and respond to the emotional experiences of their play partner and that this ability, in turn, may generalize to social interactions involving other children.

Other researchers have found similar evidence to suggest that fathers may serve a unique role in providing a parenting style and quality that contribute to young children's social development, and which are distinct from those of mothers (Clarke-Stewart, 1978; Lamb, 1975; Lamb, 1977). In his study to better understand the contribution of fathers to the parenting role, (Lamb, 1975) discovered that the mother's role in parenting is more likely to include physical care-giving, while the father's role incorporates more fun and games and serves as a link to the child's outside environment. He observed that fathers were more likely to hold their infants for play, while mothers held them for care-taking. Additionally, fathers' play was found to be more physical, idiosyncratic, and unpredictable while mothers' was more conventional and associated with the use of

objects. Fathers' play involved physical tapping games, while mothers play was more verbal.

Clarke-Stewart (1978) observed children enjoying and cooperating more in play with their fathers than mothers, and a preferential reaction to fathers' type of play. The author indicates that fathers in her study adopted a style that the parent also enjoyed, one that involved praise for the child and social-physical rather than intellectual activities or interactions with objects. Finally, Clarke-Stewart reports interesting findings that both mothers' and fathers' roles together can serve to provide optimal environments for the child's development. She found that fathers who engaged most in physical-social play were married to mothers who talked and played with objects with their children the most, which she suggested to be an optimal combination

Father's role in parent training

Another aspect of parenting that researchers suggest fathers may serve a unique and beneficial role is with respect to parent training and treatment of children's problematic behaviors. Review of the literature suggests that individuals most involved with parenting research consider father involvement in parent training to be beneficial to treatment outcomes and elect to include fathers in their programs (Budd & O'Brien, 1982; Horton, 1984). Horton (1984) concluded that an important factor in treatment outcomes of parent training research may be the father's support of his wife's skill acquisition. Budd & O'Brien (1982) recommended the continued research of fathers' integral role in family relationships, including aspects of the father role that may prove beneficial in parent training and improving problematic behaviors in children.

There is a great deal of evidence indicating that fathers can provide aspects of parenting that are unique and distinct when compared to mothers, as well as offer opportunities for positive social development in their children. As noted above, some of the more recent expectations and demands on fathers and their roles as parents may present challenges and obstacles to fathers. Role expectations and demands, and difficulties related to these challenges have often been studied with respect to mothers. Much of this research has focused, in particular, on some of the negative effects associated with parenthood. This often includes parenting stress experienced influenced by characteristics of the child, the parents themselves, and their role as a parent. The identification of factors influencing parenting stress in mothers has been beneficial in working with stressed families. It seems only appropriate then to further investigate factors that may potentially inhibit or disrupt fathers' abilities to function adequately in their parenting roles, such as increased perceptions of parenting stress, and include them in research with mothers.

Parenting Stress in Fathers

Very few studies have focused exclusively on fathers' perceptions of parenting and the stress that can result from certain aspects of parenting. Hornby (1992) in a touching review of literature on fathers' experiences in parenting children with disabilities, offers an analysis of eight published personal accounts written by fathers about their parenting experiences. Most of the fathers had children with some form of mental retardation or pervasive developmental disorder. Despite there being a wide range of reactions that fathers experienced, Hornby discovered several common themes flowing

throughout each of the accounts, one of which was the initial shock and intense feelings felt by fathers upon learning the diagnosis of their children. He also writes that many of the fathers acknowledged their own personal growth in raising a child with a disability, despite the hardships along the way. He states, however, that the findings from this review should be considered with caution, as many of these fathers were professionals, most with graduate degrees, and some working in the field of psychology. Therefore, it may be the case that these fathers are not representative of fathers of children with disabilities in general.

Hornby (1994) conducted another review and analysis of the literature on the effects of children with disabilities on their fathers. As a result of analyzing nine literature reviews, he made several assertions regarding the effects on fathers of parenting children with disabilities. He concluded that fathers' adaptation and adjustment was inversely related to the severity of the child's disability, that fathers' experience of stress was associated with the age of their children, and fathers' experience of stress was inversely related to their level of social support. He also asserted that fathers' adaptation to sons with disabilities was not as good as that with daughters. Hornby reported that results on the direction of the relationship between the child's age and fathers' stress level were mixed. Some studies indicated that fathers' stress level increased with the children's age, whereas others found no relationship or an inverse relationship with age. He commented on many methodological shortcomings of the literature he reviewed. For instance, many of the studies included a small or inadequately sampled group, and often lacked comparison control groups.

Hornby (1995) conducted his own study on the effects on fathers of parenting children with Down Syndrome. The purpose of this study was to offer empirical evidence to support or refute the assertions developed in his 1994 review on fathers. He examined the responses of 87 fathers on measures of adaptation, marital functioning, social support, stress, and personality. Results from his study showed that fathers' adaptation to daughters with Down Syndrome did not differ significantly from their adaptation to their sons, and that stress experienced by these fathers was not related to the ages of these children.

Other researchers including Cummings (1976) investigated fathers of children with either mental retardation or a chronic illness, and fathers of normally developing children without any illness. He measured a variety of psychological variables, including dysphoric affect, self-esteem, and interpersonal satisfaction. He discovered that there were several significant differences between fathers of mentally retarded and normally developing children on these psychological variables. For example, he concluded that fathers of mentally retarded children overall experienced significantly more psychological distress, in many cases more so than fathers of children with a chronic illness.

Specifically, fathers of children with mental retardation reported feeling significantly more depressed compared to fathers of normal and chronically ill children, more preoccupation with the child, and less enjoyment of the child. Cummings goes on to discuss several possible factors affecting these differences. First, it is important to consider how often the father is confronted with the child's deficiency in his daily living conditions, including his opportunities to provide ameliorative services to the child, as

well as moderate stress through sharing experiences with other fathers who are dealing with similar burdens. Cummings reported at the time of his study, fathers' parental roles only infrequently included rehabilitative or health promoting services, such as visits to the doctor, the drug store, or other special services, relative to the mother. He considers these opportunities a chance to do something directly helpful, which provides concrete evidence of their love and concern. In general, he states that there are relatively few situations to combat the sense of loss and frustration that are often included in the roles of fathers of children with mental retardation.

There are compelling practical and theoretical reasons for studying fathers of children with disabilities (Cummings, 1976, Bristol & Gallagher, 1986, Hornby, 1994). For instance, it may provide a greater of understanding of factors that may both enhance or hinder fathers' development in several areas including parenthood and marriage. Such understanding may benefit efforts of mental health services to utilize family strengths and offset long-term stress. Inclusion of fathers in parenting stress research is beneficial, and as Hornby (1994) discusses a 1986 review by Bristol and Gallagher, the evolution of research on fathers has evolved to its most appropriate phase. This phase views the family as an "interdependent system, with mothers, fathers, and children with and without disabilities reciprocally affecting each other." (p. 175).

Parenting Stress in Mothers versus Fathers

In light of the interdependence of both mothers and fathers with respect to parenting stress, comparisons between both parents' perceptions of stress are warranted. There have been a few studies demonstrating both similarities and differences in

parenting stress reports between mothers and fathers of children with and without disabilities (Baker, 1994; Beckman, 1991; Bristol, 1988; Krauss, 1991). One robust and consistent finding among the literature has been that of differences between mothers and fathers of children with and without disabilities with respect to parent-related characteristics of parenting stress.

In particular, Beckman (1991) found no differences with respect to child related contributors to parenting stress and general life stress scores, but did find significant differences overall on levels of parent related contributors to parenting stress between mothers and fathers. Mothers reported greater overall levels of parent related stress. She also found significant differences on six of the seven subscales comprising the Parent Domain. Specifically, mothers reported more depression, restrictiveness in the parental role, more problems with their sense of competence, more difficulties with their relationship with their spouse, and more negative effects on their health. Fathers reported significantly more problems with attachment, which has been a fairly consistent finding in the literature (Baker,1994; Krauss, 1993).

In addition to fathers' reporting less attachment to their children, Krauss (1993) also demonstrated that mothers reported more parent related stress with respect to their health, role restrictions, and relationships with their spouse. His study revealed no differences between mothers and fathers of young children with disabilities on parent related aspects of parenting stress such as social isolation, depression, and sense of competence. His study also demonstrated some gender differences between child characteristics contributing to parenting stress. Specifically, fathers reported more stress

related to their child's mood and adaptability than did mothers. In a study comparing mothers and fathers of ADHD children, Baker (1994) showed that overall, mothers perceived aspects of their children to be more stressful than fathers as measured by the Child Domain score of the PSI. However, the individual subscales that comprise the Child Domain did not reveal any significant differences between the genders. These inconclusive findings suggest the need to further research both parent and child related aspects of parenting stress reports between mothers and fathers.

Of particular interest is the relationship that other factors (besides child disability status and parent gender) have to parenting stress. There are several family and contextual factors that can influence, both positively and negatively, parents' perceptions of and adaptation to parenthood. Some of these factors include the availability and perceived helpfulness of social support, family demographic factors, and the importance parents place on certain parent role characteristics.

Other Factors Influencing Parenting Stress

Parenting Stress and Social Support

The relationship between stress and well-being has been widely studied. The literature has focused on a variety of stressors and variables considered to mediate some of the effects of stress. One such mediating variable that has received significant attention is that of social support. The positive effects of social support on individuals experiencing stress has been widely reported (Barth, 1983). Research has demonstrated that persons with socially supportive networks are less likely to suffer from a wide range

of negative physical and psychological health consequences (Barth, 1983; Cohen & Wills, 1985). Barth (1983) notes the buffering effects of social support in several areas where stress has been identified, including parent and adolescent relationships, marital functioning, and child-school contacts. Furthermore, Powell (1979) writes that broadly based support systems, composed of friends of all ages, neighbors, coworkers, and others in the community, offer the family resources and emotional aid, models of behavior, sources of information, and breaks from stress.

Social support networks, in particular, may provide a necessary buffer to stress for parents of children with developmental disabilities (Beckman, 1991; Bristol et al., 1988; Dyson, 1997; Krauss, 1993; Parke, 1986). Schilling and Schinke (1983) discuss the various aspects in which social support may benefit these parents. Many parents who raise handicapped children consider the onset of school age as the beginning of their immersion into their social network. These parents, not surprisingly, may be drawn to other parents of handicapped children, who share similar attitudes, including possible feelings of disappointment, rejection, worry and/or anger (Holland & Hattersley, 1980). There may be practical as well as emotional benefits to this bond, as parents may share transportation duties, information of resources, and care of their children.

Beckman's 1991 study provides more evidence of the importance of looking at variables of social support with regard to parents' experience of parenting stress. In general, it has been noted that families who report higher levels of social support tend to report lower levels of parenting stress associated with both parent and child characteristics (Beckman, 1991). Other researchers have also reported the mediating

effects of social support on levels of parenting stress (Beckman & Pokorni, 1988; Wikler, 1986; Krauss, 1991; Dyson**,** 1997). These results have been particularly true with regard to informal networks of social support, such as family and friends. Interestingly, despite a generally positive effect of social support for parents experiencing parenting stress, there have been some specific differences between mothers and fathers as to how social support mediates the effects of stress. Beckman, in her 1991 study did find similarities between mothers' and fathers' ratings of perceived helpfulness of social support, which is consistent with Krauss' 1993 study. For both parents in Beckman's study, increased informal support was associated with lower levels of stress on the Parent Domain and Total stress score of the PSI. However, fathers of children with disabilities appeared to be able to utilize formal networks (i.e. organized or structured sources of support; professionals; agencies etc) more effectively than mothers with respect to general life stress. Fathers' perceptions of the helpfulness of formal support was associated with a decrease in general life stress scores as measured on the PSI, suggesting that additional organized resources may facilitate coping for fathers in this area. In contrast to fathers, mothers' perceptions of the helpfulness of informal supports were associated with fewer reported problems on the Child Domain of the PSI. Similarly, Krauss (1993) reported that lower levels of perceived helpfulness of total social support were associated with greater levels of parent-related parenting stress.

With respect to formal support, Hornby (1992) revealed fathers' accounts of the negative feelings they felt towards professionals working with their children as well as individuals in the public. He reports that some of the literature on fathers of mentally

handicapped children suggests that they tend to cut ties of social support in general, and specifically have feelings of resentment toward the beliefs and lack of help from colleagues and neighbors. Another area of interest has been that of a particular type of informal support, such as spousal support. Some researchers have suggested that fathers play a pivotal role in moderating the stress all family members experience in families of children with disabilities (Gallagher, Beckman, & Cross, 1983), and others suggest that both maternal and paternal support are positively related to both parents' sense of competence (Parke, 1986).

Parenting Stress and Demographic Factors

Certain demographic factors, like social support, have also been considered to have an influence on levels of parenting stress, although the literature has been less conclusive in this area. There has been some discrepancy in the literature regarding particular demographic factors that appear to increase parenting stress. For example, McBride (1991a) concluded that the only consistent demographic variables related to fathers' experience of stress in the parent role was family income. Specifically, fathers with a higher family income reported lower levels of stress. They indicated feeling less restricted in their parental roles, perceived themselves as more competent parents, reported better relationships with their spouses, and considered themselves to be in better health, as measured on the parent domain of the PSI.

Lavee et al. (1996) did not explain what causes parenting stress, however, they discussed several factors that appear to be associated with greater parenting stress. Their findings did suggest that the higher the number of children, the more difficult the role of

parenting, although this was a marginal association. Parents with lower economic status reported significantly higher levels of parenting stress. The authors note that economic status affects both husbands' and wives' parenting stress as well as their psychological well-being. Other researchers have noted that economic factors were strong predictors of personal and parenting difficulties (Conger et al., 1990; Pittman et al., 1989).

Baker (1994) found some contrasting evidence to the previous studies, such that higher socioeconomic status (SES) was associated with increased parenting stress. The study by McBride (1991a) looked at fathers of non-disabled children, while Baker (1994) studied parenting stress in fathers of children with ADHD. The difference in results highlights the importance of studying parenting stress and related factors among different groups of parents, with perhaps qualitatively different parenting challenges.

The influence of the child's age on parenting stress is unclear. Mash & Johnston (1983) reported that younger children were perceived as more stressful for parents than older children. Others like Bristol (1979) and Gallagher, Beckman, & Cross (1983) have reported that older children appear to be more stressful for parents, while some studies report that the age of the child did not significantly influence parenting stress (Baker, 1994; Beckman, 1991; Hornby 1995; Lavee et al. 1996).

Some other family characteristics considered to have an influence on parenting stress include the age of the parent, number of children in the home, and number of years married. Baker (1994) reported a stress-buffering effect for families who were married longer, but no effect for the number of children. Another factor that is considered important in determining parenting stress is the age of the parent, although, few studies

have investigated its effect. One such study by Meyers (1997) reported that mother's age for both mothers of normally developing children and children with congenital heart disease was not predictive of stress. Clearly, these family variables warrant further study.

Parenting Stress and Parenting Role Identity

Parents' perceptions of the parenting role and identification with characteristic roles as parents has not received the same attention as other aspects of parenting research such as stress and social support. Parental role also appears to be a relative new comer in parenting research. However, it is a potentially important variable to consider with respect to parenting stress.

One particular tool that was designed to assist psychologists in helping parents recognize their unique and continually changing role was developed by Mowder (1991) as cited in Meyers (1997). She developed the Parent Role Questionnaire, which identifies six aspects of the parenting role. Mowder, Harvey, Moy, and Pedro (1995) looked at the six different parent role characteristics in parents of school aged children. The following six characteristics were developed: bonding, discipline, education, protection and general welfare, responsivity, and sensitivity. The authors confirmed the hypothesis that the identified role of a parent changes as the child matures. They note that children of different ages are perceived as requiring different combinations of parenting factors. Additionally, Mowder et al.(1995) discovered an influence of gender on parents' perceived role. Specifically, fathers appear to be more moderate in their interpretation of

being a parent, whereas mothers relate to their role in a more demonstrative and involved way, particularly during the first three and possibly four stages of children's development. Mowder, Harvey, Pedro, Rossen, and Moy (1993) noted how the role of parents in their children's developmental progress has led to an increased interest and delivery of service to their disabled or at-risk young children. Meyers (1997) compared maternal perceptions of the parent role with mothers of normally developing infants and mothers of infants with congenital heart disease and concluded that both groups of mothers perceived all six role characteristics as important to the parenting role. Mowder et. al (1993) note the complexity of the parent role, and that further investigation in the area is necessary.

Summary

Numerous studies have investigated the relationship between child functioning, particularly problematic child behaviors, and parenting stress. Many of these studies have focused on parents of children with ADHD and/or other behavior disorders. Other studies have examined parenting stress among parents of children who display a variety of developmental disabilities, including mental retardation Down Syndrome, autism, and other types of cognitive, adaptive, or learning impairments. In many of the disorders noted above, the magnitude and intensity of the children's behavior problems, together with the responsibility of care they impose and the unpredictability of their outcomes, place parents at high risk for stress (Crnic, Friedrich, & Greenberg, 1983; Dumas et al. 1991). Parents of Down Syndrome and/or mental retardation, although their primary concern is not usually regarding behavioral difficulties; they are often placed under stress by frequent educational and/or medical concerns (Dumas, Wolf, Fisman, Culligan, 1991).

Often, studies do not include a normal comparison group to compare variables of parenting stress. Use of a normal control group is important to determine if the sources of stress reported by parents are different for the groups, or are unique to a particular group. Additionally, inclusion of fathers' reports can provide a more detailed and helpful description of families experiences with stress.

Statement of Purpose and Rationale

This study will attempt to identify and differentiate perceived levels of stress related to child and parent characteristics among three groups of parents; (a) mothers and fathers of children with Attention Deficit Hyperactivity Disorder (ADHD), (b) mothers and fathers of children with developmental disabilities, (c) and mothers and fathers of normally developing children. This study is also interested in determining if certain family demographic and social support variables influence mothers' and fathers' perceptions of stress, and if so to what degree.

This has important implications for both research and interventions pertaining to mothers and fathers. However, information obtained from fathers is of particular importance based on the relatively small amount of research that exists as well as the emergence of new expectations for fathers with respect to parenting. Phares (1996) in her comprehensive book on fatherhood discussed several studies, which have found strong and consistent associations between fathers' level of stress and psychological symptoms, and/or poor adjustment in their children. However, most of the articles noted by Phares examined the impact of major life events or crises as opposed to aspects of one's daily life that may be considered stressful, such as working, providing for a family financially, and

taking care of children and household duties. Studying the characteristics of fathers, who are under represented in the literature on parenting may offer more specific and appropriate areas to target in order to create more effective interventions. It may also serve to increase understanding of which factors may serve as preventative measures in keeping paternal stress at a minimum.

These are factors that should be considered when studying levels of paternal stress. As roles are shifting for both men and women it will be interesting to note how some of these factors influence both mothers' and fathers' perceptions of parenting stress. Bristol and Gallagher (1986) suggest that there have been five phases in the evolution of research with fathers, that have progressed from the 50's and a phase which considered fathers generally unimportant to a current phase that views the family as an interdependent system, with mothers, fathers, and children with and without disabilities having a reciprocal effect on one another. Parke (1986) supports this notion, and in particular discusses the powerful effect of spousal support on both mothers' and fathers' sense of parental competence, which can in turn influence interaction patterns between all of the family members.

It is important to consider possible implications that different perceptions of parenting stress may have on overall functioning for these families, as well as interventions for these families. The development of more specific intervention strategies will be important with respect to utilizing the family's strengths to prevent long-term stress effects in families of children with and without disabilities.

Research Questions and related hypotheses

Question 1: Do perceptions of parenting stress differ across child diagnostic groups and/or parent gender?

Hypothesis 1a: Parents of children with ADHD and developmental disabilities will report greater parenting stress compared to parents of normally developing children. Specifically, they will report significantly greater parenting stress on the domain of child characteristics.

Hypothesis 1b: Across and within child diagnostic groups, mothers and fathers will differ in their perceptions of parenting stress.

Question 2: What factors are associated with parenting stress for mothers and fathers between the three diagnostic groups (i.e. perceived availability and helpfulness of social support, age of parent and child, number of years married, number of children in the home, and SES)?

Hypothesis 2a: There will be a significant negative relationship between overall perceived helpfulness of social support and parenting stress.

Hypothesis 2b: There will be a relationship between demographic variables and parenting stress for both mothers and fathers among the three groups.

Question 3: Are demographic variables (i.e. age of parent and child, number of years married, number of children in the home, and SES) and perceived helpfulness of informal social support predictive of parenting stress, after variance associated with child diagnostic group is accounted for in both mothers and fathers.

Hypothesis 3a: Family demographic variables and perceived helpfulness of informal social support will assist in prediction of parenting stress, over and above the contribution of child diagnosis.

The following research questions and related hypothesis are more exploratory in nature:

Question 4: What are parents' perceptions of the importance of the six parental role characteristics at different stages of development and overall?

Question 5: How do parents of children with ADHD, parents of children with developmental disabilities, and parents of normally developing children compare in their perceptions of how much they consider each of the six role characteristics to be a part of the parental role?

Hypothesis 5a: Mothers and Fathers across the three child diagnostic groups will agree in their acknowledgement of the six characteristics as being part of the parental role as defined by the PRQ.

CHAPTER II

METHOD

Participants

Participants consisted of 66 two- parent families from across the United States, although, approximately one-third of the subjects were from the Dallas and Houston regional areas of Texas. Please refer to Table 1 (p.117) for a breakdown of geographic location. Due to the increasing numbers of blended and single-parent families, step-parents were allowed to participate in the study if they had been living in the home with the child of focus for at least 1 year. Of the 66 families (n = 132 parents), 22 families (n = 44 parents) included a child aged 7-12 who had been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) by a health professional. Data from parents of ADHD children was included in the study based upon parent report and meeting criteria for ADHD according to the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV) checklist of criteria.

Twenty-two of the families had at least one child between the ages of 5 and 12 years who had been diagnosed with a developmental disability. All of the children in this category were diagnosed with Down Syndrome, with the exception of one child who was diagnosed with mental retardation of an unknown etiology. Parents of ADHD and developmentally disabled children who reported having other children with any significant psychiatric or medical conditions were excluded from the study, with the exception of parents of ADHD children who had another child with ADHD or a learning disorder.

The third group of 22 families consisted of 44 mothers and fathers who had at least one normally developing child without any significant psychiatric or medical diagnoses between the ages of 6 and 12 years. Efforts were also made to exclude families from this group of children who had other children with any significant psychiatric or medical conditions as well. Please refer to Tables 2 - 4 (pp. 118 - 124) for frequency distributions of variables (e.g. type of classroom, age of diagnosis, professional making diagnosis etc.) regarding the disabled and non-disabled children in each of the families. Table 5 (p.125) provides descriptive statistics of mothers and fathers' responses for the DSM-IV checklist of criteria for ADHD and CBCL scale scores for the ADHD children.

Mothers and fathers of ADHD children were recruited primarily through national and local chapters of a large support group for parents of ADHD children, Children and Adults with Attention Deficit Disorders (CHADD). Information regarding the study was posted on CHADD's internet web-site. Some of the ADHD families were also recruited from a community mental health center in the Dallas area. The parents of children with developmental disabilities were recruited primarily through local and national support and educational groups for parents of children Down Syndrome and/or mental retardation. Information regarding the study was posted on the national internet web-site and in some local newsletters for several organizations providing support and education for families with disabled children. These organizations include the American Association on Mental Retardation (AAMR), the Association for Retarded Citizens (ARC) and several Down Syndrome Associations. Additionally, some of the respondents were recruited through local chapters of the Special Olympics.

A majority of the ADHD and developmentally disabled parents were recruited through posting of information about the study on organizations' web sites. Parents of normally developing children were recruited primarily from the community at large, (e.g., schools and churches). Some parents of normally developing children were also recruited from the support organizations mentioned above; usually organization leaders or teachers who access information from these organizations. Additionally, a few parents of normally developing children referred friends or family to participate.

It was hoped that using a variety of community resources would help to increase representativeness of the samples. Attempts were made to match the groups of parents from each of these three groups on demographic variables such as, socio-economic status (SES) and age of the target children. Please refer to Table 6 (pp. 126-127) for the frequency distribution of demographic variables for the families.

Measures

There were four primary data gathering instruments utilized in this study:

1. Family Information Form
2. Parenting Stress Index (PSI)
3. Carolina Parent Support Scale (CPSS)
4. Parent Role Questionnaire (PRQ)

Two additional data gathering measures were administered only to parents of children with ADHD in order to verify a diagnosis of ADHD and yield descriptive child problem behavior data for this subsample:

1. The DSM-IV Checklist
2. Child Behavior Checklist (CBCL)

Family Information Form

Each family completed one of three versions of the Family Information Form based on the child's diagnostic group. The author devised family information form provided demographic and background information regarding family characteristics deemed to be related to parenting stress. Additionally, the questionnaire included questions regarding the child of focus and his/her siblings. Questions regarding the child included when the child was diagnosed and by which type of health professional, as well as estimated intellectual functioning and classroom placement of the child. Please refer to Appendix A for a copy of the three group versions of the family information form.

Parenting Stress Index

The Parenting Stress Index (PSI) developed by Abidin (1995) was used to assess respondents perceptions of parental stress. The PSI is a well-researched and widely used measure of parenting stress. It is based on an underlying assumption that parenting stress is multidimensional with important contributors such as child characteristics, parent characteristics, family context, and life stress events. The PSI is a120-item self-report questionnaire consisting of a Parent Domain and a Child Domain that yield a Total Stress Score, and an optional 19 item Life Stress Scale. The Child Domain is designed to identify stressors that parents are likely to experience as a result of their perceptions of the child's characteristics and the demands made upon them by the child. The Child Domain is composed of six sub-scales: Distractibility/Hyperactivity, Adaptability,

Reinforces Parent, Demandingness, Mood, and Acceptability. The Parent Domain reflects stress arising from parents' perceptions of themselves and their functioning as a parent. The Parent Domain is comprised of seven sub-scales: Sense of Competence, Social Isolation, Attachment, Physical Health, Role Restriction, Depression, and Relationship to Spouse. The Life Stress Scale assesses stressful situational circumstances that the parent is currently experiencing. All scores are reported as raw scores, with higher scores indicating higher levels of reported parenting stress.

It should be noted that most of the PSI's normative information includes mothers' reports as they were assumed to be the primary caregivers to children. The only normative information available on fathers included responses from a sample of 200 men, which suggested that fathers experienced significantly less stress when compared to mothers.

Test-retest correlations for the Child Domain were .82, .63, .77, and .55 and for the Parent Domain, .71, l91, l69, and .70 for intervals of 3 weeks, 1-3 months, 3 months, 3 months, and 12 months respectively. Alpha reliability coefficients for the sub-scales of the Child Domain ranged from .70 to .83 and for the sub-scales of the Parent Domain coefficients ranged from .70 to .84. The reliability coefficient for the Child Domain and Parent Domain are .90 and .93 respectively, while the Total Stress Score has an alpha coefficient of .95. Abidin (1995) notes that the large coefficients demonstrate a high degree of internal consistency for these measures.

There have been a variety of purposes for which the PSI has been validated, as well as a variety of populations, including parents of children with ADHD and a variety of developmental disabilities. Abidin (1995) provides references for numerous studies

that have successfully demonstrated the PSI's content, construct, and criterion-related validity.

Carolina Parent Support Scale

The Carolina Parent Support Scale (CPSS) (Bristol, 1979) was used as a measure of social support. Bristol (1979) adapted this scale from a scale used by Bronfenbrenner, Avgar, and Henderson (1977) as cited in Bristol (1979). She discusses some of the utility of the CPSS in that it measures not just the availability of support, but the perceived helpfulness of such support. She notes that it includes types of support that may be unique to parents of children with disabilities, and that the measure is brief so as to be included with other lengthier questionnaires. Bristol's measure focussed on support for parents of children with disabilities. The author modified the scale used for this study slightly so as to be used with parents of normally developing children as well. Please refer to Appendix A for a copy of the two versions of this questionnaire.

The CPSS is a 21-item questionnaire for which parents indicate both availability of supports and the degree of helpfulness of various supports on a five point Likert-scale. Separate scores can be obtained for the three dimensions of support including informal support (e.g. spouses, friends, neighbors), formal support (e.g. from professionals, institutions and agencies), and informational support (e.g. from books, video, or radio). Each source of support is rated from 0 (not at all helpful) to 4 (extremely helpful). Parents are able to indicate if a source of support is considered unavailable to them by crossing through the item.

Responses can be summed to yield separate scores for the level of helpfulness of Informal Supports, Formal Supports, Informational Supports, and Total Supports, as well as a score for the size of the available support network. The Informal Supports score is the summary score for items one through seven. Bristol (1979) defined informal support as interpersonal support which takes place without formal organizational structure or the outlay of any public or private monies. It includes the reported helpfulness of the parent's spouse, his/her relatives, the spouse's relatives, friends, his/her own children, other unrelated children, and parents of other children who are disabled or non-disabled. The range of possible scores for this subcategory is 0-28.

The Formal Supports scale was slightly modified for this study to include parents of non-disabled children. This sub-score includes summing items eight through fifteen. These services imply an organizational structure and/or the outlay of public or private monies. This sub-scale includes the reported helpfulness of parent groups, education programs, private doctor, public health services, paid babysitting, church or synagogue, and public and private social services. The range of scores possible on Formal Supports is 0-32.

The third sub-score is Informational Supports. This sub-score is found by summing the ratings for items 16-21. This includes reported helpfulness of lectures, meetings, books, magazines, newspapers, radio and television. The range of possible scores on this section is 0-24. Finally, a Total Supports Score can be computed by summing the ratings for all 21 items with scores ranging from 0 to 84. There was no reported information regarding the internal consistency of this measure.

The CPSS has been shown to be related to many aspects of functioning in families of children with disabilities, including stress, quality of parenting, and depression (Bristol, 1985). Beckman (1991) reported its effectiveness in predicting hypotheses of a significant negative relationship between levels of parenting stress and social support. Beckman's study investigated mothers and fathers of disabled and non-disabled children. For both parents, significant negative correlations with informal social support were obtained on both the Parent Domain and Total Stress scores of the PSI. For mothers, she found that informal support was also associated with lower stress scores on the Child Domain.

Parental Role Questionnaire

The third measure used in this study was the Parent Role Questionnaire (PRQ) developed by Mowder (1993) and based on her Parent Role Development Model (PRDM). This study utilized only three items from the PRQ, which explore individual respondent's views of the parent role. The instrument was developed in 1989 based on an analysis of parent role characteristics provided in the education and psychology professional literature and revised in 1990 based on several pilot studies. The PRQ offers parents to present their own description of the parent role, and, in addition, to rate on a 5-point Likert scale to what degree (ranging from very much [1] to not much [5]) the six parent role characteristics are a part of the parent role. The parents are also asked to rank order each role characteristic's importance at different stages in children's development. Mowder asks parents to rank characteristics over 6 different developmental stages (i.e. infancy, preschool, elementary school, adolescence, late adolescence and adulthood). This

study, however, asked parents to rank the characteristics over the first three developmental stages. The parenting characteristics include bonding (e.g. feeling love and demonstrating affection to children), discipline (e.g. imposing rules and ensuring adherence to the rules), education (e.g. guiding, teaching, and educating children), protection and general welfare (e.g. keeping children from harm and providing them with their basic needs), responsivity (e.g. responding to children and their needs), and sensitivity (e.g. matching parent responses to children's needs). Please refer to Appendix A for a copy of PRQ items used in this particular study.

Mowder et al. (1993) reported the internal consistency, test-retest reliability, and validity of the Parent Role Questionnaire. Their study asked the questions: 1) are the six parenting characteristics identified in the PRDM the same characteristics that individuals themselves generate when asked in a free-response format?, 2) Are the six identified parent characteristics viewed as important to the role?, 3) Is the issue of parent role characteristics importance a different question than the issue of parent role characteristic frequency?, 4) To what extent does the PRQ demonstrate internal consistency?, and 5) To what extent are responses to the PRQ consistent over time? The authors found that their descriptors are consistent with the variables that emerge in the literature. The six descriptors were viewed as part of the parent role more frequently than other descriptors, with 52% of the respondents citing bonding, 32% discipline, 52% education, 40% general welfare and protection, 46% responsivity, and 47% sensitivity as defining characteristics of the parent role. Additionally, respondents rated the importance on a 5-point Likert-type scale, with the mean responses as follows: bonding (M = 1.01), discipline (M = 1.68),

education (M= 1.08), general welfare and protection (M=1.07), responsivity (M=1.09), and sensitivity (M = 1.04). (The lower the mean value, the more important the characteristic is reported to be).

The internal consistency of the parent role elements importance was high because the importance rating of each parent role characteristic, taken separately, was significantly correlated ($p<.01$) with the overall importance score. The correlation for bonding is $r = .29$; discipline, $r = .78$; education $r = .47$; general welfare and protection, $r = .46$; responsivity, $r = .48$; and sensitivity, $r = .61$. The test-retest results demonstrated that the PRQ had moderate strength in this area. The data revealed that in terms of parent role characteristic importance, the relationship between responses at time 1 and time 2 (two weeks later) was significant (all $p < .001$ with the exception of bonding which was not calculated due to lack of variability of responses). The correlations were as follows: discipline, $r = .60$; education, $r = .33$; general welfare and protection, $r = .41$; responsivity, $r = .61$; and sensitivity, $r = .48$.

Child Problem Behavior Measures

DSM-IV Checklist

The DSM-IV Checklist for ADHD is a parent report checklist designed to assess the presence of the diagnostic criteria listed in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) for Attention Deficit Hyperactivity Disorder. The DSM-IV checklist is composed of 18 face-valid items. Each item corresponds directly to a single DSM-IV ADHD criterion. Respondents answer each item

on a scale from 0 to 3 indicating how true the items are with respect to their child's level of inattention/hyperactivity or impulsivity.

Child Behavior Checklist

The Child Behavior Checklist – Parent Report (CBCL; Achenbach, 1991), is a commonly used, well standardized assessment measure of child problem behaviors for children between the ages of 4-18. The CBCL consists of 113 items completed by mothers and/or fathers that yield the following clinical subscales: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. Raw scores are converted to T-scores having a mean of 50 and a standard deviation of 10. Additionally, there are two broad-band factor scores measuring Internalizing and Externalizing Problem Behaviors, and a Total Problem Behavior Score also with a mean of 50 and a standard deviation of 10.

The CBCL's normative sample includes 1300 non-referred children selected at random (Achenbach, 1991). Test-retest reliabilities range from .89 to .64 at one-week and four-month intervals respectively. There have been several studies focusing on the psychometric properties of the CBCL parent report form which have demonstrated the instrument's reliability and validity. It should be noted that the CBCL was administered only to the ADHD parent group in order to yield descriptive data on this subgroup of subjects.

Procedure

Experimental Respondents

ADHD Group

Parents of ADHD children who were interested in participating in the study after reviewing the informational flyer, were able to contact the researcher by e-mail or phone in order to request a research packet or have questions answered regarding the study. Please refer to Appendix C for a copy of the informational flyer.

Research packets were mailed or hand delivered via organizational contacts to 151 interested families of children with ADHD, and 68 packets were completed and returned. These packets included couples responding about the same child, respondents whose spouse had declined to either participate in the study or complete the study, single parents, and parents of children outside of the age range. Additionally, parents of ADHD children who did not meet the DSM-IV checklist criteria for ADHD, parents of ADHD children with other significant psychiatric diagnoses besides a learning disorder, and parents of ADHD children with siblings who had other psychiatric diagnoses returned packets. In order to eliminate extraneous variables, it was decided to restrict the study to two parent families responding about the same child. Therefore, respondents with a ADHD child consisted of 22 couples (n = 44) whose families included a child between the ages of 7 and 12 who did not have any other significant emotional or behavioral problems, nor any siblings with significant emotional or behavioral problems.

Developmentally Disabled Group

Parents of children with developmental disabilities who were interested in participating in the study after reviewing the informational flyer, were able to contact the researcher by e-mail or phone in order to request a research packet or have questions answered regarding the study.

Research packets were mailed or hand delivered via organizational contacts to 96 families of children with developmental disabilities and 53 packets were completed and returned. These families included couples responding about the same child, respondents whose spouse had declined to either participate in the study or complete the study, single parents, and parents of children outside of the specified age range. Additionally, parents of developmentally disabled children who had other psychiatric diagnoses or who had siblings with other psychiatric diagnoses completed packets. In order to eliminate extraneous variables, it was decided to restrict the study to two parent families responding about the same child. Therefore, respondents with a developmentally disabled child consisted of 22 couples (n = 44) whose families included a child between 5 and 12 who did not have any significant emotional or behavioral problems.

Control Group

Parents of normally developing children who were interested in participating in the study after reviewing the informational flyer, were able to contact the researcher by e-mail or phone in order to request a research packet or have questions answered regarding the study.

Research packets were mailed or hand delivered to 81 families of normally developing control children and 36 packets were completed and returned. These families included couples responding about the same child, respondents whose spouse had declined to either participate in the study or complete the study, single parents, and parents of children outside of the specified age range, parents of non-disabled children who reported their children as having significant emotional or behavioral problems. In order to eliminate extraneous variables, only two parent families responding about the same child were included in the study. Therefore, respondents with a normally developing child consisted of 22 couples (n = 44) whose families included a child between 6 and 12 who did not have any significant emotional or behavioral problems or siblings with reported problems.

Both experimental and control respondents were asked to answer the Parenting Stress Index, the Carolina Parent Support Scale, The Parent Role Questionnaire, and a Family Information Form fully after reading and singing an informed consent. Parents of children with ADHD also completed a DSM-IV ADHD symptom checklist to assist in verifying the presence and severity of ADHD, as well as the Child Behavior Checklist which was used to yield descriptive behavioral information. All questionnaires were identified by code numbers in order to maintain confidentiality. Parents were provided with an introductory letter including brief instructions for the project and how to complete the questionnaires. Parents were also provided an informed consent with a more detailed description of the study and requirements for participating. Please refer to Appendices B and C for copies of the consent form and introductory letter. Additionally, parents were

informed of the opportunity to have their names drawn for one of three gift certificates of a fifty-dollar value from a local department store in return for their participation. Parents were given the opportunity to return completed questionnaires to the location from where they were recruited (i.e. community mental health center or school), or to mail them to the researcher in a stamped addressed envelope provided by the researcher.

CHAPTER III

RESULTS

Preliminary Data Screening

Accuracy of data input, missing data, and distributions. Prior to conducting any descriptive, correlational, or inferential type of analyses, basic data screening activities were performed to (a) ensure the accuracy of data entry, (b) assess the presence and pattern of missing data, (c) assess the variable distributions for assumptions of normality (i.e. skewness and kurtosis) and to apply data transformations as required, and (d) assess for the presence of univariate and multivariate outliers among continuous and dichotomous variables.

Replacing missing data: Standardized Measures

On the PSI, 8 individual items were left blank by 8 of the respondents. Data were replaced for the missing items in accordance with the PSI manual's scoring procedure that allows for calculating missing data under certain conditions. The mean of the items from the subscale from which the item is missing is calculated and then rounded to the nearest whole number, and assigned to the missing item. The manual states that items from a given subscale cannot be replaced if there is more than one item missing from the subscale or more than three items total from the Child or Parent Domain. Missing items also cannot be replaced when there are more than 5 items omitted from the entire profile. All of the 8 missing items were replaced based on the PSI's scoring criteria. Final N for the PSI scales was 132.

Replacing missing data: Variables from non-standardized measures (CPSS, PRQ, Family Information Form)

On the CPSS, 10 individual items were left unanswered by 5 of the respondents. Cases with more than three missing items from this scale were not used in the analysis. In each case with less than three missing items the missing data point was replaced with the group mean value of that item (Tabachnick & Fidell, 1989). Final N for the Carolina Parent Support Scale was 131.

On the PRQ, 5 respondents left unanswered a total of 17 items. No items were replaced on this measure given the nature of the scale (rank ordered). Most of the parents who left the items blank noted that they considered all of the characteristics as equally important and had difficulty ranking the items. There were four items from the PRQ yielding quantitative descriptive information. Final N for the 1st item of the PRQ was 132. Final N for the 2nd item was 127. Final N for the 3rd item was 127. Final N for the 4th item was 125.

On the Family Information Form, missing data points for parent and family demographic variables (ethnicity, age, education, and income) were recorded for 9 participants. These missing data points were not replaced.

Skewness and kurtosis

Screening for normality (i.e. skewness and kurtosis) was conducted in two stages. Initially, the SPSS for windows Explore procedure was utilized to examine all dependent and independent variable distributions being analyzed with inferential statistics. The test of the significance of non-normality used was the ratio of each statistic (i.e. skewness and

kurtosis) to its standard error, which translates into a z score for each case (SPSS Inc, 1998; Tabachnick and Fidell, 1989). Using this procedure, the variables that produced z scores of 3.5 or greater were transformed to bring variable distributions closer to normality. These variables were transformed prior to examining the data for outliers as recommended by Tabachnick and Fidell, (1989). The second stage involved examining residual plots on several regression runs for the dependent variables to further assess for non-normality. Based on the recommendation of Tabachnick and Fidell, (1989) several transformations, including square root, logarithmic, and inverse were attempted for the non-normal variables, with the transformation resulting in the best ratio for the identified variables being applied. Among the independent variables (Social Support, and Demographic variables) the following scales were square root transformed: (1) The Availability of Informal, Informational, and Total scores of the CPSS as well as the Helpfulness of Formal, Informational and Total scores on the CPSS. Due to the significant negative skewness of the Availability scales, they were first reflected before the square root transformation Tabachnick and Fidell, (1989). Despite exhibiting significant skewness and kurtosis, the following demographic variable was not transformed due to difficulties with interpretation of the transformed variable: number of years married for the couple.

Results of the aforementioned transformations were favorable for the most part. Please refer to Tables 7-10 (pp. 128-134) for skewness and kurtosis values on the independent and dependent variables used in the primary analyses. The tables illustrate the before, and where necessary, after transformation values.

Outliers

Univariate and Multivariate outliers for the dependent measures (Child Domain, Parent Domain, and Life Stress scales of the PSI) were examined. Univariate outliers were searched for using the SPSS for Windows Explore function. Stem and leaf and box-plots were examined revealing that there were 2 extreme scores on the PSI Child Domain, 2 extreme scores on the Parent Domain, and 1 extreme on the Life Stress Scale. Tabachnick and Fidell, (1989) discuss several possible reasons for the presence of outliers, and options for decreasing their influence if they are deemed to be from the target population and not erroneously entered in the database. One option the authors recommend that often has salutory effects is assigning the outlying case a raw score that is one unit larger (or smaller) than the next most extreme score in the distribution. It should be noted also that the authors discuss different data screening strategies based on the nature of the data, grouped (ANOVA, MANOVA) or ungrouped (regression), and the type of analyses being performed.

It was decided that transforming the 2 scores on the Child Domain as well as the 2 scores on the Parent Domain would be appropriate. The first outlier on the Child Domain was within the ADHD group. One mother obtained an extreme high raw score of 193 which was transformed to 176. The 2nd extreme high raw score was obtained by a father in the developmentally disabled group. His raw score was transformed from 185 to 152, which was one unit larger than the next highest score. On the Parent Domain, one mother in the ADHD group obtained an extreme high raw score of 181, which was transformed to 176. The 2nd extreme high raw score was obtained by a mother in the developmentally

disabled group Her raw score was transformed from 186 to 169, which was one unit larger than the next highest score within that group. There was one outlying life stress scale score by a father in the developmentally disabled group. This score was not transformed because it was only two units higher than the next highest score within the group.

There were 4 univariate outliers detected for three of the independent (demographic) variables, including age of the parent, number of children in the home, and years married, which were not transformed due to the nature of these variables in describing the sample. The outliers included one father who was 69 years-old, a developmentally disabled family who reported 8 children in the household, and two couples from the developmentally disabled group who were married 32 years or longer. It was deemed that these cases were from the intended populations and that their influence was not significant enough to warrant transformation.

Multivariate outliers (i.e., cases that have an unusual pattern of scores) were examined using statistical and graphical methods. Statistically, Mahalonobis distance was computed using SPSS for windows linear regression to look at the combination of independent variables in the context of the dependent variables of the PSI. A conservative estimate ($p < .001$) for a case being an outlier is appropriate with Mahalanobis distance (Tabachnick and Fidell, 1989). There were no multivariate outliers detected in any of the regressions completed.

Preliminary Analyses

Descriptive and inferential analyses were applied to the data set to describe the sample and to address the research questions and hypotheses using the Statistical Package for the Social Sciences (SPSS 8.0, 1998). Initial one-way analyses of variance (ANOVAs) were conducted on continuous background variables (potential covariates) including age of parent, age of child, number of years married, number of children in the home, and SES, in order to determine if there were any significant differences between the three groups prior to analyzing the dependent variables. The Hollingshead two factor index was used to calculate the SES of parents based on the parents' education and occupation (Hollingshead, 1975). No significant differences were found between the three groups of parents on the aforementioned continuous variables (see Table 11, p. 136)

Chi square analyses were conducted on categorical background variables (potential covariates) such as parents' ethnicity, child gender, step-parent status, income, and education to assess for possible differences between the three groups. Significant differences were found between the groups with respect to ethnicity. There were a significantly greater number of minority respondents (Hispanic = 6 and Other = 3) in the control group χ^2 , $p < .004$. Please refer to Table 12 (p. 137) for group comparisons of equivalence on the aforementioned categorical variables. The possible confounding effects of the categorical variable, ethnicity of parent, was examined comparing the respondents' scores on the PSI Domains based on their ethnicity within each of the three diagnostic groups. Using a repeated measures ANOVA, no significant differences were found between respondent's scores on the Child or Parent Domain, suggesting that

differences in ethnic background for subjects within the control group are not likely to have a confounding effect on the results.

Primary Analyses

The primary analyses for this study included a series of MANOVA's with repeated measures over parent gender testing the effects of child disability and parent gender on PSI scores. A repeated measures multivariate design was utilized due to the non-independence of observations between mothers and fathers responses within the same family (Howell, 1992). Additionally, correlational and regressional analyses were performed to assess the relationship and degree of predictability of demographic and social support factors as they relate to parenting stress. Hierarchical multiple regression analyses were used to examine the scores of all mothers and all fathers in the study separately. One of the assumptions of multiple regression analysis, as with ANOVA and MANOVA is the independence of observations between respondents' scores. However, in the present study mothers' and fathers' responses are to some degree dependent upon one another by the nature of the spousal relationship and responding to questions about the same child. Therefore, to avoid any violation of independence, mothers' scores and fathers' scores were examined through separate analyses. The following section presents the research questions posed and results from the primary analyses.

Research Question 1

To assess hypothesis 1a and 1b regarding differences in the reported level of parenting stress between the three groups as well as between parent genders across and within the three groups, the Child and Parent Domains of the Parenting Stress Index were

used as dependent measures. Due to the non-independence of observations between mothers and fathers within the three groups, a 3 (group) x 2 (parent gender) multivariate analysis of variance (MANOVA) with repeated measures over parent was utilized. The hypothesis that parents of the ADHD and developmentally disabled children would report significantly more stress than parents of normally developing children was confirmed. Results of the multivariate test revealed a significant group effect, Wilks' Lambda F (6,122) = 7.91, $p < .0001$). Subsequent univariate analyses demonstrated that the groups differed significantly on both the Child Domain, F (2,63) = 22.87, $p < .0001$, and Parent Domain F (2, 63) = 3.65, $p < .032$. Post-hoc analysis using the Scheffe method demonstrated that parents of ADHD and developmentally disabled children reported significantly greater stress related to child characteristics when compared to parents of normally developing children. The ADHD and developmentally disabled groups, although, did not differ significantly from each other on their Child Domain scores.

With respect to the Parent Domain, only parents of ADHD children reported significantly greater stress when compared to parents of normally developing children. The developmentally disabled and ADHD groups did not differ significantly from each other on the Parent Domain score, nor did the developmentally disabled group differ significantly from the normally developing group. There were no significant multivariate group effects revealed on the Life Stress scale. Additionally, significant multivariate effects were not obtained for the interaction of group and parent, nor for the within subjects factor of parent gender. Please refer to Table 13 (p.138) for means, standard deviations, and F ratios for the PSI Domain and Life Stress Scale scores.

Given the significant group difference obtained for the Child and Parent Domain scores, the researcher was interested in further investigating which individual scales of the PSI Domains accounted for the differences. Two additional multivariate tests were therefore conducted.

The first multivariate test was a 3 (group) x 2 (parent) multivariate analysis of variance with repeated measures (over parent). The six individual scales of the Child Domain were used as dependent variables. Significant multivariate effects were not obtained either for the interaction or for parent gender. There was a significant multivariate effect for group, Wilks' Lambda $F(12, 116) = 11.66$, $p < .0001$. Subsequent univariate tests revealed that significant group differences were obtained on all six of the Child Domain scales. These scales include Distractibility/Hyperactivity, $F(2, 63) = 32.89$, $p < .0001$, Adaptability, $F(2,63) = 10.87$, $p < .0001$, Reinforces Parent, $F(2,63) = 9.04$, $p < .0001$, Demandingness, $F(2,63) = 14.77$, $p < .0001$, Mood, $F(2, 63) = 7.80$, $p < .001$, and Acceptability, $F(2,63) = 23.11$, $p < .0001$. Please refer to Table 14 (pp. 139-140) for means, standard deviations, and F ratios for parents' PSI Child Domain subscale scores across the three groups.

Post-hoc comparisons on all six scales using the Scheffe method revealed that parents from all three groups reported significantly different stress scores with respect to the child characteristics of distractibility and hyperactivity, as well as the acceptability of the child. Specifically, parents in the ADHD group reported greater stress on these two scales than parents in the developmentally disabled and control group. Parents in the

developmentally disabled group reported significantly greater stress scores on these scales compared to parents in the non-disabled group.

With respect to the adaptability and demandingness of their child, parents in the ADHD and developmentally disabled group reported greater stress in these areas compared to the non-disabled group, and did not differ significantly from each other. Finally, parents in the ADHD group reported significantly greater stress with respect to the reinforcing qualities and mood of their child as compared to the developmentally disabled and non-disabled groups. Parents' scores on these scales for both the developmentally disabled and non-disabled groups did not differ significantly from one another. It should be noted, that although no significant mulitivariate effect was obtained for parent gender, univariate tests revealed a significant effect between mothers and fathers on the adaptability scale $F(2,63) = 4.01$, $p < .049$, indicating that mothers perceived greater stress with respect to the adaptability of their child than fathers across all three groups. According to Tabachnick and Fidell (1989), significant univariate effects that are found in the absence of a significant multivariate effect can be troublesome with respect to interpretation. They suggest offering the univariate result as a guide to future research that should be interpreted tentatively.

In the second multivariate analysis of variance, the seven individual scales from the Parent Domain of the PSI were used as dependent variables. The multivariate test did not reveal a significant effect for the interaction and approached significance for the group, Wilks' lambda $F(14, 114) = 1.70$, $p < .066$. There was a significant multivariate effect for parent gender, Wilks' lambda $F(7,57) = 5.55$ $p < .0001$. There were significant

differences between mothers' and fathers' responses on two of the seven scales. Please refer to (pp. 141-142) for means, standard deviations, and F ratios for the Parent Domain subscale scores.

Univariate tests revealed significant effects for parent on the Attachment scale, $F(1, 63) = 12.89$, $p < .001$ and Role Restriction scale, $F(1,63) = 8.33$, $p < .005$. Specifically, fathers reported significantly greater stress regarding attachment to their child than mothers. Meanwhile, mothers reported significantly greater stress in terms of parental role restriction as compared to fathers.

It should be noted that univariate tests revealed a significant group effect on the scales of Competence, $F(2,63) = 3.97$, $p < .024$ and Social Isolation, $F(2,63) = 4.17$, $p < .02$ despite the multivariate test for group only approaching significance. In both cases, ADHD and developmentally disabled groups reported greater stress compared to the non-disabled group on these two scales, however, the ADHD and developmentally disabled groups did not differ significantly from each other. As noted above, Tabachnick and Fidell (1989) suggest reporting this type of result and interpreting with caution.

Research Question 2

To assess hypotheses 2a and 2b regarding the relationship of independent variables such as social support and demographic factors with parenting stress, correlational analyses using Pearson's r were utilized and are presented in Table 16 (pp. 143-144) Hypothesis 2a predicted that there would be significant negative correlations between perceived helpfulness of social support and parenting stress which was supported for both mothers and fathers on all domains of the Parenting Stress Index. Perceived

helpfulness of informal support and the perceived helpfulness of total social support were the only aspects of social support significantly correlated with parenting stress on the Child and Parent domains as well as the PSI Total Stress score for both mothers and fathers. There were no significant relationships obtained with respect to the availability or network size of social support, or with perceived helpfulness of formal or informational support. It should be noted that the availability of informal, informational, and total support scores used in the correlational analyses were first reflected before undergoing square root transformations. The helpfulness of formal, informational, and total support underwent square root transformations only. For information on means and standard deviations on mothers' and fathers' social support scores before transformation refer to Table 17

(p. 145).

Hypothesis 2b, which predicted a relationship between demographic variables and parenting stress was partially confirmed for mothers. There was a significant negative relationship found between SES and child related stress $r = -.28$, $p <. 05$, while age of the child demonstrated a significant negative relationship with parent related stress $r = -.32$, $p < .005$. Total stress scores for mothers were also negatively associated with SES $r = -.25$, $p < .05$. Not surprisingly, both mothers' and fathers' child- related stress and total stress scores were significantly related to the child having a disability.

Research Question 3

As a result of the significant correlations, further correlational analyses were utilized (i.e. regression) to test significance of perceived helpfulness of informal social

support in relation to parenting stress scores. The rationale for utilizing such statistical methods is outlined by Tabachnick and Fidell (1989), who suggest that to dichotomize/trichotomize (i.e. render it categorical) a continuous variable such as level of social support entails loss of information. Therefore, four hierarchical multiple regressions were utilized to determine whether there were different patterns in the contributors to variation in child-related characteristics of stress and parent-related characteristics of stress between mothers and fathers. The Child and Parent Domains of the PSI were used as the criterion variables in separate analyses of both mothers' and fathers' stress scores. Mothers and fathers' scores were analyzed independently based on the assumption of independence of observations with multiple regression.

There were three blocks of variables entered for all four of the regression analyses. Block 1 of the Hierarchical Regression included the dichotomous variable of the presence or absence of having a child with a disability. Block 2 included the demographic variables of age of the parent, age of the child, number of years married, number of children in the home, and SES. The third block entered into the regression included the scale of perceived helpfulness of informal support on the CPSS.

The regression equations examining predictors of mothers' and fathers' child and parent-related stress were all significant. Tables 18-21 (pp. 146-149) present results for all four regression analyses. For mothers, the child's disability and perceived helpfulness of informal support together formed a regression equation that explained 46% of the variance in child domain stress scores. Perceived helpfulness of social support when added to the equation demonstrated a 12% increment in the shared variance. After the

third block was entered into the equation, $\underline{R} = .68$, $\underline{F}\ (2,62) = 25.88$, $p < .0001$, suggesting that the addition of helpfulness of informal social support as a predictor of child related parenting stress does reliably improve R^2 .

Hierarchical regression was also employed to determine if addition of demographic variables and information regarding social support improved prediction of parent- related parenting stress beyond that afforded by having a child with a disability. For mothers, the child's disability status, age of the child, and perceived helpfulness of informal support together accounted for 38% of the variance contributing to Parent Domain stress scores. Perceived helpfulness of informal social support when added to the equation demonstrated a 22% increment in the shared variance, suggesting that it was the most significant predictor added to the regression equation, and again, reliably improved $\underline{R}^2$. After the third block was entered into the regression equation, $\underline{R} = .62$, $\underline{F}\ (3,61) = 12.20$, $p < .0001$.

There were some differences in the regression equations obtained for fathers compared to mothers, however, perceived helpfulness of informal social support remained a significant predictor of both child and parent-related parenting stress for fathers as well. For fathers, the child's disability and perceived helpfulness of informal support together formed a regression equation that explained 44% of the variance in Child Domain stress scores. Perceived helpfulness of informal social support when added to the equation demonstrated a 14% increment in the shared variance. This incremental difference was significant at the .0001 level. After the third block was entered into the regression equation, $\underline{R} = .66$, $\underline{F}\ (2,58) = 22.91$, $p < .0001$.

Results of the fourth hierarchical regression analysis demonstrated that the only significant predictor of parent-related parenting stress for fathers was perceived helpfulness of informal social support. Perceived helpfulness together with the child's disability accounted for 24% of the variance in Parent Domain scores, for which 19% of the incremental variance was attributed to helpfulness of informal social support. After the third block was entered into the regression equation, $R = .49$, $F(2,58) = 9.14$, $p < .0001$, suggesting that perceived helpfulness of informal social support provides a significant increase in prediction of parent-related parenting stress in fathers beyond the variance accounted for by child disability and demographic variables.

Research Question 4

There are some differences in how important both mothers and fathers perceive the different role characteristics to be across developmental stages. In general, parents tend to report bonding and protection as characteristics that are more important earlier during the child's development, whereas, education and discipline are reported as more important as the child enters school age. Descriptive statistics for mothers' and fathers' perceived importance of the six parental role characteristics during three developmental stages, and overall are shown in Tables 22-24 (pp. 150-154).

Research Question 5

Results from the non-parametric Kruskal-Wallis H test in Table 25 (p. 155) indicate that mothers and fathers of all groups (ADHD, developmentally disabled, and don-disabled control) view the six parental role characteristics as all a part of and important to the parenting role. The most important characteristics for mothers and

fathers are bonding (100% mothers, 96% fathers), protection (94% mothers, 92% fathers), and education (91% mothers, 91% fathers). Discipline (82% mothers, 74% fathers), responsivity (79% mothers, 79% fathers), and sensitivity (86% mothers, 73% fathers) are rated somewhat lower. Respondents therefore rated bonding, protection, and education as very much a critical part of the parental role and discipline, responsivity, and sensitivity as less important a part compared the other characteristics. Please refer to Tables 26-27 (pp. 156-159) for frequency distributions of mothers' and fathers' PRQ responses.

CHAPTER IV

DISCUSSION

Summary of Findings

This study extends the existing research on parenting stress reports by including fathers, parents of children with varying disabilities, and a non-disabled control group. Furthermore, a variety of family demographic variables and level of social support were investigated to determine the degree of relationship between such variables and parenting stress.

The results of the present investigation have provided evidence supporting the hypotheses that parents of children with disabilities report greater levels of stress related to characteristics of their children as well as more personal parent related characteristics. Furthermore, significant differences with respect to parent-related parenting stress were found between mothers and fathers. Child disability is a powerful predictor of child-related parenting stress, as is parental perceptions of social networks of friends and family. Helpfulness of social support is also a powerful predictor of parent-related parenting stress. Certain demographic and family characteristics were found to be less predictive of parenting stress. The discussion that follows will attempt to integrate these aspects of parenting as they relate to parenting stress.

Parenting Stress and Diagnostic Group

These analyses revealed both similarities and differences in levels of perceived parenting stress between parents of the three groups. The results confirm the hypothesis that parents of children with ADHD and developmental disabilities perceive characteristics of their children to be more stressful than parents of children without disabilities, overall, as evidenced by Child domain scores of the PSI. Overall, parents of children with ADHD and developmental disabilities did not differ in their perceptions of stress related to the child, however, they did differ with respect to specific child characteristics as measured on the sub-scales of the child domain. Significant differences between the groups were found on all six of the child domain sub-scales.

There were two child characteristics for which all three of the groups varied significantly from one another. These included the distractibility/hyperactivity and acceptability of the child. Parents of ADHD children perceived their children as more distractible and less acceptable than both parents of developmentally disabled and non-disabled children, while parents of developmentally disabled children perceived their child's level of distractibility and acceptability as more stressful than parents in the control group. These results are similar to other studies (Baker & McCal, 1995; Beckman 1991). Many parenting stress research studies have discussed that parents of children with disabilities are at a greater risk for parenting stress (Beckman, 1991; Crnic, Friedrich, & Greenberg, 1983; Dyson, 1997). However, results from the Dumas et al. (1991) study were more mixed. In their study the authors found that parents of children with autism and behavioral disorders reported greater stress than parents of non-disabled children.

The parents of children with Down Syndrome reported similar stress levels as parents of normally developing children**.** In the present investigation, there were some aspects of parenting stress in which parents of children with developmental disabilities, primarily Down Syndrome, did report similar levels of parenting stress to other parents of children without disabilities. These parents reported similar perceptions of how reinforcing their child is, as well as their child's mood. It may be that Down Syndrome and normally developing children appear to be less fussy, moody, and generally more positive affectively, which in turn may increase how reinforcing they appear to their parents.

There were fewer differences between the groups on parenting stress scores related to specific parent characteristics, and these differences should be interpreted with caution. The multivariate test for the group effect only approached significance, while the univariate tests to be discussed were significant. Two of the seven parent domain sub-scales indicated differences between the groups. In both cases, parents of ADHD children reported feeling less competent as a parent, and more isolated socially than both the developmentally disabled and non-disabled group, who both reported similar levels of competence and social isolation. Interestingly, parents from all three groups reported similar levels of depression, attachment to their children, health, restrictiveness in their roles, as well as similar perceptions of the relationship with their spouse. These results are similar to those of Cameron et al (1991) who reported that mothers of preschool children with developmental disabilities did not report significant differences overall on the Parent Domain or on any of the sub-scales of the Parent Domain when compared to mothers of non-disabled preschoolers. Baker & McCal (1995) also discussed similar results in that

parents of ADHD and learning disabled children did not differ significantly from parents of non-referred children with respect to parent characteristics of parenting stress.

This is in contrast with previous studies such as Mash and Johnston (1983) who found parental characteristics such as depression, role restriction, sense of competence, social isolation, and attachment to be significantly higher in mothers of ADHD children versus mothers of non-disabled children. Similarly, Beckman (1991) showed that mothers and fathers of young children with a variety of developmental disabilities reported higher parenting stress scores on six of the seven Parent Domain sub-scales compared to mothers and fathers of children without disabilities. Both groups of parents did score similarly with respect to attachment toward their child.

These mixed results may reflect in part, the more complex and at times subjective component of parent related characteristics versus child related characteristics in determining parenting stress among parents with a disabled child. It stands to reason that a parent of a child with a particular disability would report differences in certain child characteristics that may be related to their child's disability (i.e. distractibility, and adaptability). However, it does not appear to be as clear cut an issue when discussing parent characteristics and parenting stress; which may be the result of measurement differences, sampling characteristics, or a phenomena that has multiple contributors. Nonetheless, potential mediating variables with respect to parent related parenting stress, such as social support, exposure to therapy, severity and type of disability of the child, employment status of parents, which may also be contributing to stress should be explored further.

Parenting Stress and Parent Gender

Recently, the notion that mothers and fathers disagree on some aspects of parenting including perceptions of stress has been an important research topic. In the present study, fathers reported significantly more problems with a sense of attachment toward their children as compared to mothers, which has been a fairly consistent finding in the literature (Baker, 1994; Beckman, 1991; Krauss, 1993). Mothers, on the other hand, reported significantly greater problems with feeling restricted by their parenting role. This finding is somewhat inconsistent with Beckman (1991), who concluded that mothers in general reported greater stress on the Parent Domain of the PSI than fathers. She did not find any significant gender differences on the Child Domain or General Life Stress scale. Specifically, mothers reported more depression, more difficulties with their sense of competence, more restrictions on the parental role, more difficulties in their relationship with their spouse, more effects on their health, while fathers reported more stress related to attachment with their children.

In terms of child characteristics, there were no significant multivariate effects for parent gender in the present study. However, there was a significant univariate effect on the Child Domain subscale of adaptability, which showed that mothers' reported greater stress than fathers in terms of their children's adaptability. This finding should be interpreted with caution, but may offer guidance for future research (Tabachnick & Fidell, 1989). In contrast to this finding, Krauss (1993) revealed that fathers of children with disabilities reported greater parenting stress with respect to the child's adaptability. These fathers also reported feeling less attachment to and reinforcement from their children, as

well as more difficulties with their child's mood. These differences may in part be due to different types of socialization for men and women, including societal expectations. Again, some of the differences may be due to measurement differences and sample characteristics. For instance, Krauss' study included only parents of pre-school aged developmentally disabled children.

The Relationship between Parenting Stress and Social Support

The relationship between positive psychological adjustment and social support has been widely reported, as have the buffering effects of social support on stress. However, like parenting stress, social support has received a great deal of attention with respect to operationalizing and choosing a useful way to measure the phenomena. It used to be considered that the bigger the number of supports in the social network the better. However, as many researchers have discussed, this may not necessarily be the case. For instance, Melson, Windecker-Nelson, & Schwarz (1998) found that for fathers of young children, a greater number of supporters predicted more hassles, which are considered contributors to parents' general, non-parenting stress. Melson et al. (1998) suggest that an optimal number of supporters may exist, with too many being as problematic as too few. The present study found no relationship between the size (number of available supports) of the network and parents' level of stress.

Currently, many researchers are focusing on the importance of the perceived quality and helpfulness of parents' social network, as well as the relationship of the supporter (type of supporter) to the parent, rather than the network size. For instance, researchers have discussed different types of support such as informal (e.g. family,

friends, and neighbors), formal (institutions, agencies, and professionals), and informational (books, TV, magazines) and their influence on parenting stress (Beckman, 1991; Bristol, 1979). Melson et al. (1998) found that kin support in particular, predicted fewer general hassles for mothers and fathers, and fewer negative life events for fathers specifically.

Results from this study are consistent to some degree with previous studies investigating the quality and type of parents' social network. Perceived helpfulness of informal social support (i.e. family and friends) was found to be negatively related to parenting stress reports for both mothers and fathers, on the Child Domain, Parent Domain, and Total Stress score of the PSI. In essence, both mothers and fathers who reported greater helpfulness with the social support they received from family and friends also reported experiencing less parenting stress. This was true also for parents' perceived helpfulness of total support, which included all forms of support (i.e. informal, formal, and informational). However, there were no significant relationships found between parents' report of stress and their perceived helpfulness of formal or informational supports separately.

Another very interesting aspect of social support highlighted by Parke (1986) in his book chapter, is that of the "triadic" context for social support, referring to the interaction of the mother, father, and child. He discusses the mediating roles that each of these family members can serve with respect to a family's adjustment, feelings, and behaviors, as well as their dynamic nature. Dickie and Matheson (1984) as cited in Parke (1986) reported the strong correlation between spousal support, both emotional (a

measure of affection, respect, and satisfaction in the husband-wife relationship) and cognitive support (an index of husband-wife agreement in child care) were positively related to both maternal and paternal sense of competence. Parke (1986) notes that this relationship is especially strong with fathers, and concludes that successful parenting in fathers may be particularly dependent on a supportive "intrafamilial" environment. Parke also discusses the importance of studying both direct and indirect paths of mutual influence within families, with an emphasis on the indirect paths. He gives the example of how a parent may influence a child through the mediation of another family member's impact. For instance, he notes that a mother may contribute to a father's positive affect toward his child by complimenting his caregiving skill. Similarly, Dyson (1997) observed in her study between mothers and fathers of developmentally disabled children that mothers' stress was moderately and inversely related to fathers' report of family social support. These reports suggest that social support's relationship to parenting and parenting stress should be examined more thoroughly, particularly among the entire family system. However, as demonstrated in this study there do appear to be powerful positive effects from family support.

The Relationship between Parenting Stress and Demographic Factors

Research has been mixed as to the influence of certain demographic factors on parenting stress. In the present investigation mothers' perceptions of parenting stress appear to be influenced slightly more by demographic factors than fathers' perceptions. In fact, there were no relationships found between fathers' parenting stress reports and the demographic factors investigated including age of parent, age of child, years married,

number of children in the home, or SES. However, some demographic factors appeared to influence mothers' report of stress. Specifically, mothers who reported lower SES scores also reported greater child related and total stress scores on the PSI. One interpretation for this may be that financial stress related to lower SES may have influenced mothers' perceptions of parenting stress. While mothers with younger children reported greater parenting stress related to parent characteristics as measured on the Parent Domain of the PSI. The mothers' age, years married, and number of children were not found to be significantly related to mothers' parenting stress reports.

McBride (1991) in his study of 54 fathers of pre-school children found the only consistent demographic variable related to paternal stress was family income. Fathers in his study with greater family incomes reported feeling less restricted in their parental roles, more competent as parents, less isolated socially, as having better relationships with their spouses, and considered themselves to be in better health, as measured on the Parent Domain of the PSI. He notes that the lower stress levels may have resulted in some of the "advantages" of having higher income. Other research has yielded similar results. For instance, Hornby (1994) in a study of fathers of school-aged children with Down Syndrome found significant inverse relationships between fathers' level of stress and their educational level, as well as their perceived financial adequacy. Lavee et al. (1996) looked at the effect children had on parental stress and the parents' marital quality. They found in their theoretical model that the economic status of the parents added substantially to both mothers' and fathers' level of distress. Specifically, the lower the economic status the greater level of distress. Pittman et al. (1989) demonstrated similar

results when they found that lower income was associated with greater parenting difficulties. Baker (1994), however, demonstrated contrasting results when he found that higher SES was more predictive of greater parenting stress in mothers and fathers of ADHD children.

Other demographic variables that have been investigated include the number of children, the age of the child, and the number of years married. Lavee et al. (1996) reported finding that a higher the number of children was associated with more difficulty in the parenting role. With respect to the number of years married, Baker (1994) concluded that parents with a longer marital relationship reported significantly less parenting stress. There have been more conflicting results with regard to the influence of the child's age on parents' experience of stress. Several researchers have found no significant relationship between the child's age and mothers' and fathers' stress level (Baker, 1994; Beckman, 1991; Hornby (1995). Bristol (1979), however, reported that mothers of older autistic children reported greater parenting stress and difficulties, and Cummings (1976), reported that fathers of younger children reported higher levels of stress as compared to fathers of older children.

Predictors of Parenting Stress

As a result of the significant relationships found between certain aspects of social support and family characteristics, hierarchical regressions were performed to determine to what extent some of these variables are able to predict parenting stress, and how they compare in their degree of predictability. Separate hierarchical regressions were computed for mothers and fathers on each of the PSI domains. One of the main objectives

was to investigate how influential the demographic and social support variables were in predicting parenting stress after variance from the child's disability status was accounted for. In the present investigation perceived helpfulness of informal support was a critical factor in predicting both mothers' and fathers' perceptions of both child and parent related aspects of parenting stress. Helpfulness of informal social support appeared to be more predictive of parent related parenting stress as measured on the Parent Domain of the PSI. It accounted for an additional 22% and 19% of the variance for mothers and fathers respectively, while only 12% and 14% incremental variance for mothers and fathers respectively on the Child Domain. The presence of a disability accounted for 34% and 30% of the variance in parenting stress scores for mothers and fathers respectively on the Child Domain, while only an additional 5% for both mothers and fathers respectively on the Parent Domain. For fathers the additional 5% was not found to be significant. Other studies have demonstrated that helpfulness of social support was only predictive of mothers' parent related parenting stress but not fathers (Krauss, 1993). Krauss' study included perceived helpfulness for informal and formal support together, which may have influenced social support's degree of predictability for fathers' stress. It may be that fathers do not access formal supports as much as mothers and thus may not deem them to be as helpful as their family and friends. Nonetheless, these differences require further investigation.

The present study also found one of the demographic variables investigated to be a significant predictor for mothers' parenting stress, but not fathers'. The child's age was a significant predictor of mothers' parent related parenting stress and accounted for an

additional 11% of the variance beyond that of the child's disability status. Specifically, parenting a younger child was more predictive of parent related parenting stress in this study. This finding may be due in part to the mother having to attend more to the child with respect to supervision and guidance, than say would be required for an older child. Thus, more time spent supervising the child, may restrict some of their opportunities for personal activities or privacy. As Pittman et al. (1989) note, the availability of privacy plays an indirect, although important, role in determining parenting difficulty in mothers. Additionally, supervising a younger child may affect parents' ability to devote time to their health and social activities as well.

Krauss (1993) discusses some other powerful predictors of parenting stress for mothers and fathers; which include personal attributes such as locus of control, with respect to the outcome of events, and perceptions of the family's environment (i.e. adaptability and cohesion).

Some studies have investigated the predictive power of certain family and environmental variables to parenting stress and parenting difficulty through the use of various path models (Lavee et al, 1996; Pittman et al., 1989). The use of such models allows for the examination of direct and indirect effects of certain variables on several aspects of parenting stress. Pittman et al (1989) note that some contradictions in the parenting stress research may be the result of not detecting indirect relationships when using a single multiple regression. In a study of married couples with children, Lavee et al. (1996) concluded that economic distress and the number of children in the home have a direct influence on parenting stress. Economic distress was found to add substantially to

both parents' level of distress, as well as their psychological well-being, while an increased number of children was marginally associated with distress in the parenting role. Pittman et al. (1989) in their study of predictors to parenting difficulty in a randomly selected sample of 434 mothers and fathers reported that the number and age of children as well as income had relevant, although, indirect roles in the prediction of parenting difficulty. The authors note that several similarities between mothers' and fathers' respective models were found, however, there were some important differences that highlight the importance of constructing separate models for mothers and fathers. For instance, the number of children as well as the ages of the children directly affected the availability of privacy for mothers, which in turn influenced parenting inconvenience and ultimately parenting difficulty. For fathers, however, income was significantly predictive of financial stress, which was directly related to reports of parenting difficulty. Financial stress did not predict anything in the mothers' model. Pittman et al. (1989) discuss another important issue about parenting difficulty and stress, that includes the notion of difficulty in the parenting role being able to change over time. As a result of its malleable nature, the authors suggest the use of longitudinal studies for improved methodology.

Parental Role Characteristics

Another aspect of parenting that is subject to change is that of parenting role. Mowder et al. (1995) discuss the importance in helping parents, teachers, and other professionals involved with children to understand how the parenting role. In this study, mothers and fathers of children with ADHD, children with developmental disabilities, and children without disabilities view their parental role similarly. The most important

role characteristics for mothers and fathers were reported to be bonding, protection, and education.

Minton and Pasley (1996) investigated how a father's definition of his role in fatherhood influences his behavior with his children. A key finding in their study was that certain aspects of role identity were related to father involvement in child-related activities. The authors reported that having a high level of competence, satisfaction, and investment in the father role predicts a father's involvement. Ihinger-Tallman, Pasley, and Buehler (1993) also suggested that how fathers define their role influences their behavior and parent involvement.

Theoretical Implications

Bristol and Gallagher (1986) discuss some very important theoretical implications with respect to the inclusion of fathers in parenting research. The authors note that not until fairly recently “paternal neglect” had been the distinguishing characteristic of most psychological theories and research paradigms in the investigation of parents of both handicapped and non-handicapped children. Mention of the paternal role was often the result of discussing father absence due to death or divorce. The authors list several reasons as to neglect of fathers. One reason of which is the reported difficulty in obtaining access to fathers for investigation. They also state that the manner in which research programs were designed and data analyzed was more geared toward the study of dyadic, versus triadic or even larger social structures. Another reason includes the theoretical biases that focused on the mothers as having a unique hold on child socialization and education. Furthermore, most developmental theorists including Bowlby and Freud

emphasized the mother-child relationship to the exclusion of the father. This shift in thought regarding fathers' roles, place fathers in a new position with regard to their children's level of functioning. It brings to mind some dated terms such as the "refrigerator mother", referring to a term used to explain the development of some psychological disorders in children and young adults. Fathers are likely to be put to the test with regard to the impact their attachment and interaction style may have on the adjustment of their children.

With this new focus on fathers there are likely to be new demands and expectations for fatherhood. LaRossa (1988) discusses a situation in which the culture of fatherhood places increased expectations for fathers to be more involved with their children, and the conduct does not always match the expectation. Mothers have always been expected to be involved with parenting and their children's development. As such, their perspective is likely to be quite different from fathers in some respects to parenting. These increased demands upon fathers may spawn new approaches to viewing parenting stress in fathers, and perhaps ways to measure possible feelings that are incongruent with what society may expect and how the father may actually feel or behave, or even learned. This study in particular highlights the importance of investigating the different perceptions between mothers' and fathers' reports of stress, particularly with how fathers perceive attachment and mothers their role as parents.

Finally, this research brings up many questions about the directional cause of parenting stress. As mentioned earlier, stress is considered dynamic, bi-directional, and multidimensional in nature. Many researchers acknowledge that parenting stress may

stem from multiple sources, but nevertheless have asserted that the child's problematic behavioral characteristics are often its primary determinants (Barkley, 1990; Fischer 1990). With this in mind it will be important also to investigate parents' potential psychopathology and stress level on the child's behavior.

Applied Implications

An important objective of the current investigation was to identify specific factors that may be associated with both higher and lower levels of parenting stress. This knowledge would provide therapists and other professionals working with families of both disabled and non-disabled children crucial information about more helpful intervention strategies. One very important factor associated with alleviating stress in parents of disabled and non-disabled children is that of social support, particularly informal sources of support. It will be important for mental health and educational professionals to help in locating and identifying potential sources of support for parents. This should include investigating informal as well as formal and informational forms of support. Beckman (1991) discussed an important point regarding her findings that formal support, unlike informal support was not significantly associated with lower levels of parenting stress on either the Child or Parent Domains of the PSI. She notes that this finding is troubling because it brings up questions as to what extent service providers are meeting the needs of families. Beckman did note, however, that an increase in formal support for fathers was associated with lower levels of general life stress. This suggests that additional support aside from family and friends may be beneficial in alleviating some of the general stresses (i.e. moving, job change, economic change, etc.) that fathers

may encounter. In the same vein, Krauss (1993) emphasizes the necessity for specialists to gain a greater awareness of the coping styles and "agents" that provide assistance for parents; which will ultimately serve to enhance the responsiveness and effectiveness of their treatment plans. Brotherson et al. (1986) in their chapter focusing on fathers of disabled children offer several suggestions to professionals working with families of children with special needs. The authors note the importance of professionals to have an extensive knowledge about and to spend time working with disabled children. They suggest demonstrating an acceptance of these fathers, which can be facilitated through accepting and respecting their children. Brotherson et al. also noted that fathers of disabled children often do not have a sufficient number of models to give them information and support in the more expressive or alternative roles of fatherhood. They suggest organizing support groups or developing mentor type relationships with other fathers who have developed some of these roles already. One very practical role that the therapist may play is that of helping the father plan for the future. Brotherson et al. discuss preparing fathers of disabled children to anticipate transitions and stresses that may occur throughout the life cycle. Cummings (1976) revealed that fathers of mentally retarded children, versus fathers of chronically ill and normally developing children, demonstrated a significantly greater need for organization, routine, and orderliness, suggesting that future planning of activities that may be required for their children (i.e. residential and vocational settings where they may function as adults), can be located with the help of the therapist.

The notion of becoming more aware of ways to help parents access better support, also brings up the importance of professionals understanding the different types of stresses that may arise from children with different disabilities. For example, the parent of a behavior disordered child may have more concerns about how to help their child develop skills to help them attend better at school and get along with others, or to prevent them from violating the rights of others or breaking the law. While the parent of developmentally disabled child may be more concerned about how to help the child develop better adaptive skills that will help improve his/her level of self-sufficiency. Either way, it will be important for therapists to identify the areas of the child's functioning that are most distressing, as well as personal attributes that may be putting them at risk for greater stress.

The results from the present investigation also highlight the importance of professionals considering how mothers and fathers differ with respect to which parent and child related characteristics are likely to put them at greater risk for experiencing stress. Increased knowledge of both the similarities and differences can help professionals target the areas of intervention more effectively. For instance, a consistent finding in the literature has been that fathers report greater problems with attachment toward their children (Baker, 1994; Beckman 1991;Krauss, 1993). It may be that professionals need to investigate further this phenomena and perhaps look at non-traditional ways that fathers may form attachments to their children, as most of the literature has focused on styles of attachment between mother and child. The present study also found that mothers reported greater stress regarding restrictions from their role as parent. It may be important for

professionals to help mothers recognize the value of more effectively balancing some of their own personal needs with those of other family members. This may be in the form of providing them with information on respit care or tapping into greater spousal support. Parke (1986) notes that the kin support of today is in somewhat of a transition. In the past many families were not as geographically or emotionally distanced from their families of origin. Often parents could rely on the more available grandparents, however, he notes that many grandparents today even if they are geographically close, are likely working or have other commitments. He emphasizes the importance of developing strategies for accessing support from families in the context of these new intergenerational realities. Parent support programs can help parents who may lack adequate kin support to recognize some of the "fictive kin" present in their lives such as other relationships that may operate like family (Parke, 1989). Additionally, therapists can help to encourage and validate meeting the personal needs outside of being a parent for both mothers and fathers.

Last but not least, to help parents more effectively identify and deal with aspects of their lives that are contributing to stress as well as family dysfunction, community based service programs may provide more effective relief than traditional programs. Parke (1986) notes that despite the helpfulness of interviews and self-report information from parents, they are not sufficient. He notes that direct observations of mother and father alone and with their children are necessary. Also, seeing first hand the environment and context within which families interact can provide a more accurate perspective on

potentially stressful aspects of the family's living situation that may need to be targeted in an intervention program.

Social Policy Implications

Dyson (1997) discusses the importance of exploring parenting stress of parents of children with disabilities who are beyond the early childhood years. Dyson notes that Public Law 99-457 includes education and support for families with children between birth and three years, but not families with older children. Such early intervention programs appear to be helpful, but if extended to include families of children beyond three years may be even more beneficial, as research has shown some of the detrimental effects of older children's disability on family functioning (Barkley, 1990; Bristol, 1979). This study in particular emphasizes the importance of addressing stress levels and the supportive needs of parents of children with disabilities of school age.

Krauss (1993) points out some positive developments with respect to Public Law 99-457. For instance, the focus is now on programs responsible for evaluating the needs of the family as a whole. Before the law, there appeared to have been an unbalanced focus exclusively on the child in isolation from his/her most central environment. Krauss recommends that intervention/prevention program developers continue to consider the needs of both parents as well as siblings and other involved family members with respect to planning services for families. As this study points out, it may also be beneficial to address the stress levels of mothers and fathers of normally developing children as well, given that mothers tend to demonstrate greater difficulty with role restrictions.

Another interesting social policy consideration deals with the advancement of medical and scientific technology. We live in a time when many persons with illnesses or diseases can be successfully treated and in some cases kept alive, when in the past that may have not been the case. For instance, many severely premature infants are able to be sustained to a non-life threatening full-term. In some cases these children are able to function at a level equal to or greater than their cohorts born full-term, although some may have to contend with various physical or mental difficulties throughout their lives. It will be important to consider how as a society we are equipped to deal with such issues. This technology, compounded with a strong movement toward "deinstitutionalization" (Bristol and Gallagher, 1986), indicates that increasing numbers of disabled, some severely, are spending most of their lives at home. The effect of which should be considered.

Limitations to the Present Study

In terms of generalizability, some characteristics of the current sample need to be taken into account with respect to how far these results can be generalized. The present sample was composed primarily of middle-aged, upper middle income and SES level, college educated parents. Additionally, study respondents from all three groups were volunteers. Also, many recruited subjects who had initially agreed to complete the study did not. Thus, the participants who completed the questionnaires may be a special subgroup of volunteers within all the parents originally interested in participating.

Many efforts were made to control for possible confounding variables. However, there were some variables that were different between the groups. Most parents in the

control group resided in Texas, more so than the parents in the other two groups. There could be differences in stress related to these geographical differences. Also, there were differences in ethnic background of the parents between the groups. There were a greater number of minority parents in the control group. Thirdly, parental psychopathology or parental experience with therapy was not investigated, which may have influenced stress scores.

The study may have also been limited by not having direct assessment or report from the children of focus in the three groups. Furthermore, causation of parenting stress cannot be inferred as the study was quasi-experimental in design.

Measurement Issues and Associated Research Implications

Parenting stress is somewhat complicated in that there are several components to consider based on interactions of the parent and child. As a result, there has been great variability in how researchers have chosen to operationalize the construct of parenting stress (Anastopoulos, Guevremont, Shelton & DuPaul, 1992), which has made it difficult in some cases to make cross-study comparisons. This study included one

In terms of measurement issues, shared-method variance (all self-report) data in the present study may have influenced correlations between parenting stress and other variables. It is important to consider some of the limitations with self-report data such as the validity of the responses and response biases. Additionally, use of more sophisticated statistical analyses such as structural equation modeling versus correlational or multiple regression may provide more information about some variables that might be indirectly related to parenting stress, but nonetheless contributors.

Future Research

Often a research study raises more questions than it answers (Cone & Foster, 1996). Several questions regarding parenting stress in mothers and fathers were raised by this particular study that warrant further, as well as different modes of investigation. For instance, other potential predictors of parenting stress than those investigated in this study should be researched. These include parents' locus of control, parental psychopathology, parent's employment status, and single parenthood. Some other child related predictors of parenting stress that should be studied further are the gender of the child. Criterion or other dependent variables that warrant future investigation include family and marital functioning, to determine how they may influence parental stress and may be influenced by parenting stress. The quality of parent-child interactions in families experiencing stress should be compared to those of families not experiencing stress.

As noted earlier, single parenthood is a very important variable to study with regard to parenting stress. It will be important to compare single parents of both disabled and non-disabled children, as well as single mothers and fathers. Studies should focus on determining if being a single parent affects parenting stress levels in a similar fashion as certain child characteristics have been documented to do so. Also, it will be important to investigate if single parents of disabled children report higher levels of stress as compared to their married cohorts. Interestingly, Dumas et al. (1991) noted that the parents of the behavior disordered children in their sample of normally developing and disabled children had a higher incidence of being single. Hornby (1994) reported that based on a literature review of research on fathers of disabled children, that these fathers were more

likely to report marital dissatisfaction and leave the marriage. However, Hornby (1995) reported that based on his sample of 127 families of children with Down Syndrome, fathers reported higher levels of marital satisfaction compared to previous samples, and that they were as likely to be divorced as the national average for divorce (approximately 9%) in England at the time of the study. Lavee et al. (1996) in their study of married families suggest that children, even those without disabilities affect parents stress level, which in turn effects the quality of the marriage. These conflictual findings raise more questions as to some of the effects of parental stress and child disability on marital satisfaction and rate of divorce.

The concept of attachment is a variable that also deserves further attention with respect to its effect on parenting and child development. Aspects of father-child attachments will be of particular importance to study (Beckman, 1991; Krauss, 1993), as fathers have typically reported greater stress with respect to attachment. Future research should investigate some of the causes for fathers feeling less attached to their children, and what effect fathers' decreased sense of attachment has on father functioning and familial functioning as a whole. As noted earlier, it may be necessary to measure attachment in a broader sense, and investigate possible alternative ways that fathers bond or feel a sense of closeness with their children. It will be interesting to see if fathers' sense of attachment is a function of the child's developmental level, by comparing attachment in fathers of children at different ages.

Social Support is perhaps one of the most important variables to investigate in future research, in part, because of the significant mediating effect it has been

demonstrated to have on all types of stress, including stress related to parenting. The next study of this nature should continue to investigate different aspects of social support, including emotional and cognitive forms of support. The Carolina Parent Support Scale used in this study measured the availability (size) of three types of social support as well as the perceived helpfulness of that support. In the future, it will be important to define helpfulness more thoroughly. For example, some parents may perceive family or friends that are more action oriented (i.e. transporting children, supervising children, or playing with children) as particularly helpful, while some parents may perceive the individual who listens to their problems, consoles them, and provides suggestions as more helpful. Therefore, measures that tap into which specific aspects of support are considered helpful to parents and why will be critical in better understanding the construct, and what specific "agents" work best for certain parents. This may be particularly important with respect to the investigation of the effects of spousal support. Additionally, further investigation of the differences in how perceptions of social support influence stress and other aspects of parenting in both mothers and fathers is critical. Parke (1986) notes that spousal support is related to an increased sense of competence for both mothers and fathers, but concludes that it may be more of an important correlate in fathers than in mothers. He notes that fathers' level of emotional and cognitive support successfully differentiated high and low competency as a parent in fathers, but not in mothers.

Research has demonstrated the importance of investigating the "family triad" (Parke, 1986), or in essence, the interactions of all family members including mother, father, and child. Over time, research has shifted to view the family as an interdependent

system, with mothers, fathers, and children who are disabled and non-disabled as mutually affecting each other (Bristol & Gallagher, 1986; Hornby, 1994). With this in mind, future studies on parenting stress should include observations and/or self-report from all family members. It may not always be possible to acquire valid self-report data from young children, but efforts should be made to gather more information on child functioning through interview and observation of the child. Furthermore, studies should investigate the functioning of siblings of children with disabilities, to determine what extent the child's disability may be influencing siblings' adjustment and well-being.

In addition to investigating the aforementioned variables, future studies could benefit from a change in methodology and design. Ideally, researchers should employ a multi-trait, multi-method design that includes direct observation and interviews with the subjects in addition to self-report data. The investigation should also be employed longitudinally, as stress is considered dynamic and changing.

With regard to sample characteristics, studies with a wider range of ages for both parent and child should be utilized to compare stress levels between parents of infants, toddlers, latency age and adolescent children. A wider age range of parents who are from different socio-economic classes and ethnic/cultural backgrounds should be investigated, as most parenting stress research has focused on middle class, Caucasian, two parent families (Rodriguez & Murphy, 1997). Finally, statistical methods that allow for the detection of direct as well as indirect factors influencing parenting stress should be administered in future studies. As Pittman et al. (1989) discuss, some of the contrasts in research findings may be the result of not detecting some relevant, although indirect

relationships between parenting stress and certain parent, child, and family variables. The authors suggest using path models versus single multiple regression to detect these sometimes subtle variables that may ultimately influence parents' experience of stress.

APPENDIX A

INSTRUMENTS

FAMILY INFORMATION FORM - A

Questions Regarding Parents of Child with Attention-Deficit/Hyperacitivity Disorder

Important* Person completing form ***** (circle one) **Mother** **Father**

1. What is your age? _____

2. Marital Status:

1 = Married 2 = Divorced 3 = Separated 4 = Single/never married 5 = Widowed

3. If married, how many years? _____ Age of Spouse _____

4. What is **your** racial/ethnic background? (circle one)
1= Caucasian (White) 2 = African American (Black) 3 = Hispanic American
4 = Asian American 5 = Native American 6 = Other

Your **spouse's** racial ethnic background?
1= Caucasian (White) 2 = African American (Black) 3 = Hispanic American
4 = Asian American 5 = Native American 6 = Other

5. What is **your** highest level of education? (circle one)

1 = Grade School
2 = Some High School
3 = High School Diploma or GED
4 = Some College or Trade School
5 = Four Year College Degree
6 = Some Graduate Courses
7 = Graduate Degree

Your **Spouse's** highest level of education?

1 = Grade School
2 = Some High School
3 = High School Diploma or GED
4 = Some College or Trade School
5 = Four Year College Degree
6 = Some Graduate Courses
7 = Graduate Degree

Your occupation _____ Your **spouse's** occupation _____

6. What is your yearly family income, which includes the combined income of you and your spouse or partner? (circle one - if unsure please estimate)?

1 = $0 - $24,999
2 = $25,000 - $49,999
3 = $50,000 - $74,999
4 = $75,000 or more

7. How many children do you have living in your home? _____

8. Are you a step-parent of the child with ADHD? YES NO
Is your spouse a step-parent of the child YES NO

If yes, how long have you/your spouse been living in the home with the child? _____

9. Please list the age and gender of all of your children and mark yes or no if they are living in the home? If more than one child with ADHD between 6 and 12, specify which child will be the child of focus.

	Age	Gender	Living in the home
Child of Focus	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Questions Regarding Child with Attention-Deficit/Hyperactivity Disorder (ADHD)

Date of Birth: _____ Grade: _____ Gender (circle one) Male Female

What type of classroom is he/she in (e.g., special education, regular, gifted)?_____

When was your child diagnosed with ADHD? (Month & Year) ? _____ _____

What type of professional(s) made this diagnosis? (e.g. psychiatrist, psychologist, neurologist, etc.)? _____

Has your child's **cognitive/intellectual** functioning been assessed? YES NO

If yes, by whom? (e.g. psychologist, school diagnostician, etc.) _____

If yes, what range of **cognitive/intellectual** functioning is estimated?

1 = Low Average 2 = Average 3 = High Average 4 = Superior or above

Does child have any other clinical diagnoses or significant cognitive, physical, or mental impairments (i.e. learning disorders, depression, etc.) in addition to ADHD? YES NO

If yes, please list _____

If yes, is ADHD the primary diagnosis? _____

Is your child currently taking medication for his/her symptoms of ADHD? YES NO

If no, has your child ever taken medication for ADHD in the past? YES NO

If you have other children, do they have any significant cognitive, physical, or mental health impairments (e.g. ADHD, learning disorders, depression, or physical illnesses etc.)? YES NO

If yes, please list _____

FAMILY INFORMATION FORM - B

Questions Regarding Parent of Child with a Developmental Disability

Important*Person completing form***** (circle one) **Mother** **Father**

1. What is your age? _____

2. Marital Status:

1 = Married 2 = Divorced 3 = Separated 4 = Single/never married 5 = Widowed

3. If married, how many years? _____ Age of Spouse _____

4. What is **your** racial/ethnic background? (circle one)
1= Caucasian (White) 2 = African American (Black) 3 = Hispanic American
4 = Asian American 5 = Native American 6 = Other

Your **spouse's** racial ethnic background?
1= Caucasian (White) 2 = African American (Black) 3 = Hispanic American
4 = Asian American 5 = Native American 6 = Other

5. What is **your** highest level of education? (circle one) Your **spouse's** highest level of educ.?

1 = Grade School
2 = Some High School
3 = High School Diploma or GED
4 = Some College or Trade School
5 = Four Year College Degree
6 = Some Graduate Courses
7 = Graduate Degree

1 = Grade School
2 = Some High School
3 = High School Diploma or GED
4 = Some College or Trade School
5 = Four Year College Degree
6 = Some Graduate Courses
7 = Graduate Degree

Your occupation _____ Your **spouse's** occupation _____

6. What is your yearly family income, which includes the combined income of you and your spouse or partner? (circle one - if unsure please estimate)?
1 = $0 - $24,999 3 = $50,000 - $74,999
2 = $25,000 - $49,999 4 = $75,000 or more

7. How many children do you have living in your home? _____

8. Are you a step-parent of the child with a developmental disability? YES NO
Is your spouse of step-parent of the child with a developmental disability? YES NO

If yes, how long have you/your spouse been living in the home with the child? _____

Family Information Form, page 2

9. Please list the age and gender of all of your children and mark yes or no if they are living in the home? If more than one child with a developmental disability between 6 and 12, specify which child will be the child of focus for the study.

	Age	Gender	Living in the home
Child of focus	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Questions Regarding Child with a Developmental Disability

Date of Birth: _____ Grade: _____ Gender (circle one) Male Female

What type of classroom is he/she in (e.g., special education, self-contained)?
_____

Is there a **known etiology/diagnosis** or **chromosomal factors** (i.e. Down Syndrome, Fragile X etc.) related to the developmental disability? YES NO

If yes, please specify _____

When was your child diagnosed with the developmental disability? (Month & Year) _____

What type of professional made this diagnosis? (e.g. geneticist, neurologist, pediatrician, etc.)?
_____

Cognitive/Intellectual Functioning

Does child with developmental disability have any **cognitive/intellectual impairments**? YES NO

If yes, please answer the following:

What type of professional(s) made diagnosis of intellectual impairment? (psychologist, developmental psychologist, school diagnostician, etc) _____

What range of **cognitive/intellectual** impairment is your child classified?

1= Mild Impairment 2 = Moderate Impairment 3 = Severe Impairment 4 = Profound Impairment

What is the level of your child's **intellectual functioning** estimated to be (e.g. IQ score)? _____

Adaptive Behavior

Does your child demonstrate any deficits in **adaptive behavior**? YES NO

If yes, what type of professional assessed these deficits? (e.g. psychologist, diagnostician, etc.)

_____

What is your child's overall **adaptive behavior level** estimated to be?

1= High 2 = Moderately High 3 = Average 4 = Moderately Low 5 = Low

What is your child's level of functioning in the following specific skill areas **as compared** to children **without** developmental delays?

Communication

1= High 2 = Moderately High 3 = Average 4 = Moderately Low 5 = Low

Daily Living Skills

1= High 2 = Moderately High 3 = Average 4 = Moderately Low 5 = Low

Socialization Skills

1= High 2 = Moderately High 3 = Average 4 = Moderately Low 5 = Low

Motor Skills

1= High 2 = Moderately High 3 = Average 4 = Moderately Low 5 = Low

Does your child have any other clinical diagnoses or mental or physical impairments (i.e. ADHD, physical illness) in addition to the developmental disability? YES NO

If yes, please list _____

If you have other children, do they have any significant cognitive, physical, or mental health impairments (e.g. ADHD, Down Syndrome, depression, or physical illnesses etc.) ? YES NO

If yes, please list _____

FAMILY INFORMATION FORM - C

Questions Regarding Parent

Important * Person completing form***** (circle one) **Mother** **Father**

1. What is your age? _____

2. Marital Status:

1 = Married 2 = Divorced 3 = Separated 4 = Single/never married 5 = Widowed

3. If married, how many years? _____ Age of Spouse _____

4. What is **your** racial/ethnic background? (circle one)
1= Caucasian (White) 2 = African American (Black) 3 = Hispanic American
4 = Asian American 5 = Native American 6 = Other

Your **spouse's** racial ethnic background?
1= Caucasian (White) 2 = African American (Black) 3 = Hispanic American
4 = Asian American 5 = Native American 6 = Other

5. What is **your** highest level of education? (circle one) Your **spouse's** highest level of educ.?

1 = Grade School
2 = Some High School
3 = High School Diploma or GED
4 = Some College or Trade School
5 = Four Year College Degree
6 = Some Graduate Courses
7 = Graduate Degree

1 = Grade School
2 = Some High School
3 = High School Diploma or GED
4 = Some College or Trade School
5 = Four Year College Degree
6 = Some Graduate Courses
7 = Graduate Degree

Your occupation _____ Your **spouse's** occupation _____

6. What is your yearly family income which includes the combined income of you and your spouse or partner? (circle one - if unsure please estimate)?
1 = $0 - $24,999 3 = $50,000 - $74,999
2 = $25,000 - $49,999 4 = $75,000 or more

7. How many children do you have living in your home? _____

8. Are you a step-parent of the child of focus? YES NO

Is your spouse a step-parent of the child? YES NO

If yes, how long have you been living in the home with the child? _____

Family Information Form, page 2

9. Please list the age and gender of all of your children and mark yes or no if they are living in the home? If more than one child between the ages of 6 and 12, please choose one child for the focus of the study and specify which child.

	Age	Gender	Living in the home
Child of Focus	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____

Questions Regarding Specified Child between ages 6 and 12

Date of Birth: _____ Grade: _____ Gender (circle one) Male Female

What type of classroom is he/she in (e.g. regular, gifted, etc)? _____

Has your child's **cognitive/intellectual** functioning been assessed? YES NO

If yes, by whom? (e.g. psychologist, school diagnostician, etc.) _____

If yes, what range of **cognitive/intellectual** functioning is estimated?

1 = Low Average 2 = Average 3 = High Average 4 = Superior or above

Does your child have any significant physical, behavioral, or emotional problems, or has he/she been diagnosed by a physician or mental health professional? YES NO

If yes, please explain below:

Do you have any other children with any significant physical, behavior, or emotional problems?

If yes, please explain below:

Carolina Parent Support Scale
(Adopted from Marie Bristol's CSPH, 1979)

How helpful are each of the following to you as the parent of a child? Please circle the response that best describes how helpful. Cross out any sources of help that are not available to you.

	Not at all Helpful	Somewhat Helpful	Moderately Helpful	Quite Helpful	Extremely Helpful
My Relatives	0	1	2	3	4
My husband's/wife's Relatives	0	1	2	3	4
Husband or wife	0	1	2	3	4
Friends	0	1	2	3	4
My own children	0	1	2	3	4
Other children (not related)	0	1	2	3	4
Other parents	0	1	2	3	4
Parent groups	0	1	2	3	4
Education program	0	1	2	3	4
Private doctor	0	1	2	3	4
Public health services	0	1	2	3	4
Short-term babysitting	0	1	2	3	4
Church or synagogue	0	1	2	3	4
Private social services (counseling, lawyer etc.)	0	1	2	3	4
Public social services (social workers, legal aid)	0	1	2	3	4
Lectures	0	1	2	3	4
Meetings	0	1	2	3	4
Books	0	1	2	3	4
Magazines and newspapers	0	1	2	3	4

Radio	0	1	2	3	4
Television	0	1	2	3	4

Carolina Parent Support Scale for Parents of Children with Special Needs

(Adopted from Marie Bristol's CSPH, 1979)

How helpful are each of the following to you as the parent of a child with special needs? Please circle the response that best describes how helpful. Cross out any sources of help that are not available to you.

	Not at all Helpful	Somewhat Helpful	Moderately Helpful	Quite Helpful	Extremely Helpful
My Relatives	0	1	2	3	4
My husband's/wife's Relatives	0	1	2	3	4
Husband or wife	0	1	2	3	4
Friends	0	1	2	3	4
My own children	0	1	2	3	4
Other children (not related)	0	1	2	3	4
Other parents of children with special needs	0	1	2	3	4
Parent groups	0	1	2	3	4
Special education program	0	1	2	3	4
Private doctor	0	1	2	3	4
Public health services	0	1	2	3	4
Short-term babysitting	0	1	2	3	4
Church or synagogue	0	1	2	3	4
Private social services (counseling, lawyer etc.)	0	1	2	3	4
Public social services (social workers, legal aid)	0	1	2	3	4
Lectures	0	1	2	3	4
Meetings	0	1	2	3	4
Books	0	1	2	3	4
Magazines and newspapers	0	1	2	3	4
Radio	0	1	2	3	4
Television	0	1	2	3	4

Parent Role Questionnaire

(Shortened version of Barbara Mowder's 1994 PRQ)*

1. Describe your role as a parent.

2. To what extent do you view each of the following as part of the parent role. **Check the line which best expresses how much you view each factor as part of the parent role**. There is an opportunity to add comments after each factor and a chance to add additional characteristics which you may think important.

	1 very much	**2 some**	**3 not sure**	**4 little**	**5 not much**
Bonding (feeling love for and to your child)	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5
Discipline (imposing rules and assuring adherence to the rules)	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5
Education (guiding teaching, and educating your child)	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5
Protection and General Welfare (keeping your child from harm and providing them with basic needs)	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5
Responsivity (being responsive to your child's needs)	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5
Sensitivity (being sensitive to your child and your child's needs)	_____ 1	_____ 2	_____ 3	_____ 4	_____ 5

3. Please rank order the importance of parent role characteristics at each stage in a child's development. Mark 1 for the parent role characteristic which you think is the most important, 2 for the characteristic second in importance, 3 for the next most important characteristic, 4 and so forth. There are six characteristics at each level:

1 most important
2 second in importance
3 third in importance
4 fourth in importance
5 fifth in importance
6 sixth in importance

Infant-Toddler (0-2 years)	**Preschool** (3-5 years)	**Elementary** (6-12 years)
Bonding _____	Bonding _____	Bonding _____
Discipline _____	Discipline _____	Discipline _____
Education _____	Education _____	Education _____
Protection-Welfare _____	Protection-Welfare _____	Protection-Welfare _____
Responsi-vity _____	Responsi-vity _____	Responsi-vity _____
Sensitiv-ity _____	Sensitiv-ity _____	Sensitiv-ity _____

4. Now, using the same rank ordering (1st - 6th in importance), please rank order the 6 parent role characteristics overall in their importance to parenting.

Bonding ____ Discipline ____ Education _____ Protect/Welfare _____ Responsitivity _____ Sensitivity ____

* For complete information on this questionnaire and other related research contact Barbara Mowder, Pace University

APPENDIX B

CONSENT FORMS

INFORMED CONSENT -A

Title: Parenting Stress: A comparison of Mothers and Fathers of Disabled and Non-Disabled Children.

Invitation to Participate: You are being asked to participate in a research study involving the collection of information through written questionnaires on several aspects related to your experiences as a parent. The researcher is a doctoral student from the University of North Texas completing her doctoral dissertation.

Purpose: The purpose of this study is to investigate factors related to parenting stress between mothers and fathers of children with Attention-Deficit Hyperactivity Disorder (ADHD), children with Developmental Disabilities, and parents of typically developing children.

Procedure: You will be asked to complete three questionnaires, two behavior checklists and a family information form regarding yourself and your child. You may return the questionnaires to the researcher at the site from where you received the packet, or mail them in the stamped addressed envelope provided. If you have more than one child between the ages of six and twelve, please choose one child to focus on for the study and note which child on the Family Information Form.

Time Commitment: The questionnaires will take approximately 45 minutes to complete.

Benefits: The benefits to you include the potential of gaining better understanding of factors related to the experience of stress in parents. This may also serve to benefit future research and intervention procedures in this area. You may request below to have your family entered in a drawing for one of three fifty-dollar gift certificates for participating in the study.

Risks and/or Discomfort: The potential risks of the method of research used in this study may include some psychological discomfort related to answering questions regarding you and your child that may be of a personal nature.

Confidentiality: The information collected will be analyzed in group form only: no data will be linked to subjects personally.

Right to Refuse and/or Withdraw: Your participation is voluntary. You may refuse to take part. You may withdraw from participation at any time by contacting the researcher.

For Further Information: Sign below if you understand the information given to you about the research and choose to take part. Make sure that any questions have been answered and that you understand the study. If you have any questions or concerns about the study you may contact the principle investigator, Alexis Walker, M.A., who is being supervised by David Baker, Ph.D. Ms. Walker may be reached at _____.

Informed Consent: This project was reviewed and approved by the Office of Research and Sponsored Projects at the University of North Texas. Please note that without written consent, information from subjects cannot be collected for this study. Thank you for your time.

ABSTRACT OF FINAL RESULTS:
___ No, don't send abstract.

_____
Signature of participant

___ Yes, please mail abstract to following address:

_____
Date

_____
_____

____ Check here if you wish to have your name entered in the drawing (must put address if you wish to enter drawing)

INFORMED CONSENT B

Title: Parenting Stress: A comparison of Mothers and Fathers of Disabled and Non-Disabled Children.

Invitation to Participate: You are being asked to participate in a research study involving the collection of information through written questionnaires on several aspects related to your experiences as a parent. The researcher is a doctoral student from the University of North Texas completing her doctoral dissertation.

Purpose: The purpose of this study is to investigate factors related to parenting stress between mothers and fathers of children with Attention-Deficit Hyperactivity Disorder (ADHD), children with Developmental Disabilities, and parents of typically developing children.

Procedure: You will be asked to complete three questionnaires and a family information form regarding yourself and your child. You may return the questionnaires to the researcher at the site from where you received the packet, or mail them in the stamped addressed envelope provided. If you have more than one child between the ages of six and twelve, please choose one child to focus on for the study and note which child on the Family Information Form.

Time Commitment: The questionnaires will take approximately 45 minutes to complete.

Benefits: The benefits to you include the potential of gaining better understanding of factors related to the experience of stress in parents. This may also serve to benefit future research and intervention procedures in this area. You may request below to have your family entered in a drawing for one of three fifty-dollar gift certificates for participating in the study.

Risks and/or Discomfort: The potential risks of the method of research used in this study may include some psychological discomfort related to answering questions regarding you and your child that may be of a personal nature.

Confidentiality: The information collected will be analyzed in group form only: no data will be linked to subjects personally.

Right to Refuse and/or Withdraw: Your participation is voluntary. You may refuse to take part. You may withdraw from participation at any time by contacting the researcher.

For Further Information: Sign below if you understand the information given to you about the research and choose to take part. Make sure that any questions have been answered and that you understand the study. If you have any questions or concerns about the study you may contact the principle investigator, Alexis Walker, M.A., who is being supervised by David Baker, Ph.D. Ms. Walker may be reached at_____.

Informed Consent: This project was reviewed and approved by the Office of Research and Sponsored Projects at the University of North Texas. Please note that without written consent, information from subjects cannot be collected for this study. Thank you for your time.

ABSTRACT OF FINAL RESULTS:
___ No, don't send abstract.

_____
Signature of participant

___ Yes, please mail abstract to following address:

_____
Date

_____
_____

____ Check here if you wish to have your name entered in the drawing (must put address if you wish to enter drawing)

APPENDIX C

FLYERS/PARENT LETTERS

University of North Texas
Psychology Department
Denton, Texas 76203

Dear Parents:

I am a doctoral candidate completing my dissertation in Clinical Psychology at the University of North Texas. I am involved in research investigating several aspects of parenthood that may be related to perceptions of parental stress. I am collecting information from **Mothers and Fathers** of children with Developmental Disabilities (including Down Syndrome), from parents of children with Attention-Deficit Hyperactivity Disorder (ADHD), and from parents of typically developing children between the ages of **5** and **12**. Information based on your experiences will add to our knowledge about factors associated with increased, as well as decreased levels of parenting stress. Knowledge in this area may ultimately lead to better intervention strategies for families experiencing stress, as well as preventative strategies.

Your invaluable help in collecting this research includes completing three questionnaires and a Family Information Form that take approximately 30-45 minutes to complete. The questionnaires can be completed in your home and should include both Mother and Father's responses. All information will be kept confidential and the data collected will remain anonymous through the use of code numbers, and will be analyzed in aggregate form only. You may request to have your name entered for a drawing of one of three $50.00 gift certificates when you receive your packet. Names will be entered after receiving the completed questionnaires and will be drawn in the fall of 2000. Also, parents may request a copy of the results of this study when they receive their packet.

You may request a packet by e-mailing the researcher at awalker@pdq.net , or she may be contacted at_____. All packets will be mailed to interested parents. The packets will include a postage paid envelope to return the questionnaires to the researcher when complete. It is important that you specify which packet is most appropriate for your family. Parents with at least one child with **ADHD** (between 5 and 12 years) should request **Packet #1**. Parents who have at least one child with a **Developmental Disability** (e.g. Down Syndrome, Fragile X, or Mental Retardation) (between 5 and 12 years) should request **Packet #2**. Parents who have at least one child of **typical development** (between 5 and 12 years) and no other children with ADHD or Developmental Disabilities should request **Packet #3**.

Thank you very much for your time and consideration of this research project.

Sincerely,

Alexis Walker, M.A.
Graduate Student in Clinical Psychology

University of North Texas
Psychology Department
Denton, Texas 76203

Introductory Letter - A

Dear Mother/Father:

I am involved in research investigating several aspects of parenthood that may be related to perceptions of stress as a parent. I am interested in collecting information from parents of children with ADHD between the ages of six and twelve. Information from your experiences may benefit our knowledge about what aspects of parenthood may lead to increased levels of stress, as well as those aspects that are associated with lower levels of stress. Knowledge in this area may ultimately lead to better intervention strategies for families experiencing stress, as well as possible strategies to prevent stress in families.

Your participation would include completing three different questionnaires and two symptom checklists. There is also a Family Information Form that only one parent needs to complete. Please read and sign the consent form. There will be no identifying information other than an arbitrary code number; all data will be anonymous. When you have completed the questionnaires, please return the information in the stamped/addressed envelope provided. Please make sure to seal your responses in the envelopes provided that are marked either mother or father. Your participation in this study is greatly appreciated. You may request to have your name entered for a drawing of one of three $50.00 gift certificates from a local department store on the informed consent page. Names will be entered after receiving the completed questionnaires and will be drawn in the fall of 2000.

If you have more than one child with ADHD between 5 and 12 years, please mark which child will be the child of focus on the Family Information Form. Also, make sure that you and your spouse are focusing on the same child and please do not discuss your responses with your spouse before completing the questionnaires.

Sincerely,

Alexis Walker, M.A.

University of North Texas
Psychology Department
Denton, Texas 76203

Introductory Letter – B

Dear Mother/Father:

I am involved in research investigating several aspects of parenthood that may be related to perceptions of stress as a parent. I am interested in collecting information from parents of children with Developmental Disabilities between the ages of five and twelve. Information from your experiences would benefit our knowledge about what aspects of parenthood may lead to increased levels of stress, as well as those aspects that are associated with lower levels of stress. Knowledge in this area may ultimately lead to better intervention strategies for families experiencing stress, as well as possible strategies to prevent stress in families.

Your participation would include completing three different questionnaires. There is also a Family Information Form that only one parent needs to complete. Please read and sign the consent form. There will be no identifying information other than an arbitrary code number; all data will be anonymous. When you have completed the questionnaires, please mail the information in the provided stamped/addressed envelope. Please make sure to seal your responses in the envelopes provided that are marked either mother or father. Your participation in this study is greatly appreciated. You may request to have your name entered for a drawing of one of three $50.00 gift certificates from a local department store on the informed consent page. Names will be entered after receiving the completed questionnaires and will be drawn in the fall of 2000.

If you have more than one child with a Developmental Disability between 5 and 12 years, please mark which child will be the child of focus on the Family Information Form. Also, please make sure that you and your spouse are focusing on the same child in your responses. Please do not discuss your responses with your spouse before completing the questionnaires.

Sincerely,

Alexis Walker, M.A.

University of North Texas
Psychology Department
Denton, Texas 76203

Introductory Letter – C

Dear Mother/Father:

I am involved in research investigating several aspects of parenthood that may be related to perceptions of stress as a parent. I am interested in collecting information from parents of normally developing children between the ages of five and twelve. Information from your experiences would benefit our knowledge about what aspects of parenthood may lead to increased levels of stress, as well as those aspects that are associated with lower levels of stress. Knowledge in this area may ultimately lead to better intervention strategies for families experiencing stress, as well as possible strategies to prevent stress in families.

Your participation would include completing three different questionnaires. There is also a Family Information Form that only one parent needs to complete. Please read and sign the consent form. There will be no identifying information other than an arbitrary code number; all data will be anonymous. When you have completed the questionnaires, please return the information in the stamped and addressed envelope. Please make sure to seal your responses in the envelopes provided that are marked either mother or father. Your participation in this study is greatly appreciated. You may request to have your name entered for a drawing of one of three $50.00 gift certificates from a local department store on the informed consent page. Names will be entered after receiving the completed questionnaires and will be drawn in the fall of 2000.

If you have more than one child between 5 and 12 years, please mark which child will be the child of focus on the Family Information Form. Also, please make sure that you and your spouse are focusing on the same child in your responses. Please do not discuss your responses with your spouse before completing the questionnaires.

Sincerely,

Alexis Walker, M.A.

APPENDIX D

TABLES

Table 1

Frequency Distribution of Geographic Location of Families by Group

State	ADHD[a] N	DD[b] N	Control N	Total N
Arizona	1	1	0	2
California	2	2	2	6
Canada	0	1	0	1
Colorado	1	0	0	1
Florida	1	1	0	2
Indiana	2	0	1	3
Maryland	0	1	0	1
Minnesota	2	0	2	4
Nebraska	1	0	0	1
Ohio	1	0	0	1
Oklahoma	1	0	1	2
New Jersey	0	3	0	3
New York	2	4	1	7
Pennsylvania	2	2	0	4
Texas	5	5	15	25
Virginia	1	2	0	3

[a] Attention Deficit Hyperactivity Disorder Group, [b] Developmentally Disabled Group

Table 2

Frequency Distributions for Children with ADHD

Variable		Total n
Type of Classroom		
Regular	12 (54.5%)	
Special Education	2 (9.1%)	
Regular plus Resource	4 (18.2%)	
Home Schooled	1 (4.5%)	
Regular plus Gifted	3 (13.6%)	
		22
Age when 1st Diagnosed		
4 years	3 (16%)	
5 years	5 (22.7%)	
6 years	4 (18.2%)	
7 years	5 (22.7%)	
8 years	4 (18.2%)	
9 years	1 (4.5%)	
		22
Length of time since 1st Diagnosis		
2 - 12 months	4 (18.1%)	
13 - 24 months	3 (13.6%)	
25 –36 months	4 (18.1%)	
37 - 48 months	4 (18.1%)	
49 - 60 months	3 (13.6%)	
61 - 72 months	2 (9.1%)	
over 72 months	2 (9.1%)	
		22
Type of Professional Making 1st Diagnosis		
Psychologist	6 (27.3%)	
Psychiatrist	8 (36.4%)	
School Diangnostician	2 (9.1%)	
Neurologist	2 (9.1%)	
Pediatrician	4 (18.2%)	
		22

(table continues)

Table 2 cont'd

Variable		Total n
How long since 2nd Diagnosis		
5-12 months	6 (66.7%)	
13-36 months	1 (11.1%)	
60-72 months	2 (22.2%)	
		9
Type of Professional		
Psychiatrist	1 (11.1%)	
School Diagnostician	2 (22.2%)	
Neurologist	1 (11.1%)	
Pediatrician	3 (33.3%)	
Other physician	2 (22.2%)	
		9
Intellectual Assessment		
Yes	15 (83.3%)	
No	3 (16.7%)	
		18
Type of Professional		
Psychologist		
School Diagnostician		
Estimated IQ Range		
Low Average	1 (4.5%)	
Average	5 (22.7%)	
High Average	6 (27.3%)	
Superior	3 (13.6%)	
		15
Other Diagnoses		
Yes	5 (27.3%)	
No	17 (72.7%)	
Specify Diagnoses		
Learning Disorder	4 (80.0%)	
Benign Brain Tumor	1 (20.0%)	5

(table continues)

Table 2 cont'd

Variable		Total n
ADHD Primary diagnosis		
Yes	4 (80.0%)	
No	1 (20.0%)	
		5
ADHD Medication currently		
Yes	17 (72.3%)	
No	5 (22.7%)	
		22
Medication taken In past?		
Yes	2 (40.0%)	
No	3 (60.0%)	
		5
Siblings with ADHD		
Yes	4 (18.2%)	
No	18 (81.8%)	
		22
Siblings with Learning Disorder		
Yes	2 (9.1%)	
No	20 (91.9%)	
		22

Table 3

Frequency Distributions for Children with Developmental Disabilities

Variable		Total n
Type of Classroom		
Regular	4 (19.1%)	
Special Education	7 (33.3%)	
Self-Contained	2 (9.5%)	
Regular plus Resource	1 (4.8%)	
Regular with Aide	2 (9.5%)	
Inclusion	5 (23.8%)	
		21
Etiology of Disability		
Down Syndrome	21(95.5%)	
MR unknown etiology	1 (4.5%)	
		22
Age when Diagnosed		
Birth – 6 months	21 (95.5%)	
6 months – 1 year	1 (4.5%)	
		22
Type of Professional Making Diagnosis		
Geneticist	8 (36.4%)	
Neurologist	8 (36.4%)	
Pediatrician	3 (13.5%)	
Obstetrician	2 (9%)	
Other Physician	1 (4.5%)	
		22
Cognitive/Intellectual Impairments		
Yes	21 (95.5%)	
No	1 (4.5%)	
		22

(table continues)

Table 3 cont'd

Variable		Total n
Type of Professional Making assessment		
Psychologist	4 (23.5%)	
Developmental Psychologist	2 (11.8%)	
School diagnostician	8 (47.1%)	
Other	2 (11.8%)	
No professional	1 (5.9%)	
		17
Level of Cognitive Impairment		
Mild	5 (22.7%)	
Moderate	13 (59.1%)	
Severe	1 (4.5%)	
		19
Estimated IQ Range		
Unknown	5 (29.4%)	
50 – 55	3 (17.7%)	
56 – 64	2 (11.8%)	
65 – 75	1 (5.9%)	
80 – 85	2 (11.8%)	
Above 90 (more than 2 years below age level)*	3 (17.7%)	
		17
Adaptive Behavior Deficits		
Yes	13 (51.9%)	
No	8 (38.1%)	
		21
Type of Professional Making Adaptive Dx		
Psychologist	3 (30.0%)	
School diagnostician	4 (40.0%)	
Pediatrician	1 (10.0%)	
Other physician	2 (20.0%)	
		10

(table continues)

Table 3 cont'd

Variable		Total n
Overall Adaptive Behavior Level		
High	2 (12.5%)	
Moderately High	2 (12.5%)	
Average	4 (25.0%)	
Moderately Low	7 (43.8%)	
Low	1 (6.3%)	
		16
Communication		
High	1 (4.5%)	
Moderately High	2 (9.1%)	
Average	3 (13.6%)	
Moderately Low	8 (36.4)	
Low	8 (36.4%)	
		22
Daily Living Skills		
High	2 (9.1%)	
Moderately High	2 (9.1%)	
Average	5 (22.7%)	
Moderately Low	11 (50%)	
Low	2 (9.1%)	
		22
Socialization		
High	2 (9.l%)	
Moderately High	3 (13.6%)	
Average	6 (27.3%)	
Moderately Low	10 (45.5%)	
Low	1 (4.5%)	
		22
Motor Skills		
Moderately High	2 (9.1%)	
Average	2 (9.1%)	
Moderately Low	4 (18.2%)	
Low	14 (63.6%)	
		22

Table 4

Frequency Distributions for Normally Developing Control Children

Variable		**Total n**
Type of Classroom		
Regular	15 (68.2%)	
Gifted	7 (31.8%)	
		22
Previous Intellectual Assessment?		
Yes	3 (50.0%)	
No	3 (50.0%)	
		6
Type of Professional Making assessment		
School diagnostician	3 (100%)	
		3
Estimated IQ Range		
Low Average		
Average		
High Average	3 (75.0%)	
Superior	1 (25.0%)	
		4

Table 5

Descriptive Statistics for DSM – IV Criteria and CBCL Scales in ADHD Children

Variable	N	Mean (SD)
DSM-IV[a] Checklist		
Mothers' Checklist		
ADHD – Inattentive	9	20.4 (3.5)
ADHD – Combined Type	12	17.3 (6.5)
ADHD – Hyperactive/ Impulsive	1	37.7 (8.1)
Fathers' Checklist		
ADHD – Inattentive	7	18.3 (3.8)
ADHD – Combined Type	10	15.5 (6.5)
ADHD – Hyperactive/ Impulsive	1	34.0 (8.9)
ADHD – did not meet criteria	3	

	Mean (SD)
CBCL[b] Scales	
Mothers' Scores	
Internalizing	10.5 (7.8)
Thought/Attention	.0 (.0)
Externalizing	16.0 (6.7)
	N = 19
Fathers' Scores	
Internalizing	9.3 (7.3)
Thought/Attention	.0 (.0)
Externalizing	15.0 (8.8)
	N = 20

[a] Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition, [b] Child Behavior Checklist

Table 6

Frequency Distribution of Family Demographic Variables by Group

	ADHD	DD	Control	Total	n
Ethnicity					129
Caucasian	43 (97.7%)	41 (93.2%)	32 (78.0%)	116	
African Amer.	0 (.0%)	2 (4.5%)	0 (.0%)	2	
Hispanic Amer.	0 (.0%)	1 (2.3%)	6 (5.4%)	7	
Asian Amer.	0 (.0%)	0 (.0%)	0 (.0%)	0	
Native Amer.	1 (.0%)	0 (.0%)	0 (.0%)	1	
Other	0 (.0%)	0 (.0%)	3 (.0%)	3	
Education					131
Grade school	0 (.0%)	0 (.0%)	0 (.0%)	0	
Some high school	2 (4.7%)	1 (2.3%)	0 (.0%)	3	
H.S. grad/GED	4 (9.3%)	5 (11.4%)	5 (11.4%)	14	
Some college/ Trade school	16 (37.2%)	13 (29.5%)	7 (15.9%)	36	
Four year college	8 (18.6%)	10 (22.7%)	12 (27.3%)	30	
Some grad courses	4 (9.3%)	2 (4.5%)	4 (9.1%)	10	
Graduate degree	9 (20.9%)	13 (29.5%)	16 (36.4%)	38	
Income					130
$0-$24,999	0 (.0%)	0 (.0%)	0 (.0%)	0	
$25,000 – $49,999	14 (33.3%)	6 (13.6%)	4 (9.1%)	24	
$50,000 – $74,999	16 (38.1%)	10 (22.7%)	12 (27.3%)	38	
$75,000 +	12 (28.6%)	28 (63.6%)	28 (63.6%)	68	

Children in Home					132
One	2 (9.1%)	5 (22.7%)	2 (9.1%)	9	
Two	9 (40.9%)	9 (40.9%)	10 (45.5%)	28	
Three	8 (36.4%)	5 (22.7%)	8 (36.4%)	21	
Four	3 (13.6%)	2 (9.1%)	2 (9.1%)	7	
Five	0 (0%)	0 (0%)	0 (0%)	0	
Six	0 (0%)	0 (0%)	0 (0%)	0	
Seven	0 (0%)	0 (0%)	0 (0%)	0	
Eight	0 (0%)	1 (4.5%)	0 (0%)	1	

(table continues)

Table 6 cont'd

Frequency Distribution of Family Demographic Variables by Group

	ADHD	DD	Control	Total	n
Gender of Child					66
Male	16 (72.7%)	13 (59.1%)	11 (50.0%)	40	
Female	6 (27.3%)	9 (40.9%)	11 (50.0%)	26	
Step-Parent					132
Yes	3 (6.8%)	1 (2.3%)	2 (4.5%)	6	
No	41 (93.2%)	43 (97.7%)	42 (95.5%)	126	

Table 7

Skewness and Kurtosis Scores for Parents of ADHD Children on Dependent Measures (PSI), Independent Measures (CPSS), Demographic Variables, and Potential Covariates Before and After Transformations

	Mothers				Fathers				Total ADHD Group			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z score)		Skew (z scr)		Kurtosis(z scr)	
Variables	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
PSI[a] Domain												
Child Domain	1.2	---	0.6	---	0.9	---	0.0	---	1.4	---	0.3	---
Parent Domain	2.2	---	1.2	---	1.0	---	-0.7	---	0.9	---	0.1	---
Life Stress	2.3	---	2.2	---	1.3	---	-0.8	---	2.4	---	0.1	---
Total Stress	2.0	---	1.4	---	-0.7	---	-0.6	---	0.9	---	0.6	---
CPSS[b] Scales												
Availability												
Informal[d]	-4.9	4.3	5.9	4.0	-3.6	3.4	1.6	1.2	-5.8	5.1	5.0	3.1
Formal[d]	-1.8	1.5	-1.0	-1.3	-1.2	0.7	-1.1	-1.7	-2.0	1.4	-1.5	-2.1
Informational[d]	-4.0	3.4	3.0	1.7	-2.1	1.5	-0.1	-0.9	-4.1	3.2	1.6	0.1
Total Support[d]	-1.8	1.1	-0.5	-1.4	-1.7	0.7	-0.2	-1.4	-2.3	1.2	0.5	-1.9
Helpfulness												
Informal	-0.4	---	0.1	---	0.1	---	-1.2	---	-0.1	---	-0.6	---
Formal[c]	0.9	-0.2	-0.7	-0.5	1.8	-0.7	0.4	0.9	2.4	-0.8	0.7	1.0
Informational[c]	1.9	0.6	1.0	-0.4	0.9	-0.6	-1.1	-0.7	1.7	-0.7	-0.4	-0.4
Total Support[c]	2.4	1.7	1.0	0.3	1.4	0.2	0.6	-0.0	2.5	1.1	0.9	-0.0

[a] Parenting Stress Index, [b] Carolina Parent Support Scale (table continues)

Table 7 cont'd

	Mothers				Fathers				Total ADHD Group			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z score)		Skew (z)		Kurtosis(z)	
Variables	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Demographic												
Age of Parent[e]	0.7	---	-0.6	---	2.3	---	3.1	---				
Age of Child[e]									0.2	---	-1.6	---
Years Married[e]									0.1	---	-0.4	---
Children in home[e]									0.2	---	-0.5	---
SES[e]									0.1	---	-0.6	---

Note. Z scores for skewness obtained in each case by dividing the value for skewness by the skewness standard error. Z scores for kurtosis obtained in each case by dividing the value for kurtosis by the kurtosis standard error. z values greater than or equal to 3.5 are considered significant. Dashes indicate that transformations were not undertaken on these variables.

[c] square root transformation. [d] reflect and square root transformation. [e] transformations not undertaken as interpretation of variable would be adversely affected.

Table 8

Skewness and Kurtosis Scores for Parents of Children with Developmental Disabilities on Dependent Measures (PSI), Independent Measures (CPSS), Demographic Variables and Potential Covariates Before and After Transformations

	Mothers				Fathers				Total DD Group			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z score)		Skew (z)		Kurtosis(z)	
Variables	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
PSI[a] Domain												
Child Domain	0.7	---	-1.1	---	1.0	---	1.2	---	1.3	---	0.8	---
Parent Domain	0.6	---	0.7	---	0.3	---	0.4	---	0.7	---	0.6	---
Life Stress	0.7	---	-1.2	---	2.3	---	1.0	---	2.2	---	0.1	---
Total Stress	1.0	---	-0.8	---	0.5	---	0.5	---	0.8	---	0.0	---
CPSS[b] Scales												
Availability												
Informal[d]	-1.2	1.2	-1.9	-1.8	-2.3	1.9	0.5	-0.5	-2.7	2.2	-0.2	-1.3
Formal[d]	-2.1	1.4	0.0	-0.9	-2.5	1.9	0.5	-0.7	-3.2	2.2	0.3	1.1
Informational[d]	-5.4	4.9	7.2	5.4	-5.5	4.5	8.5	4.9	8.0	6.5	13.1	7.4
Total Support[d]	-3.0	1.7	1.8	-0.1	-2.9	1.9	1.4	-0.5	4.0	2.4	2.0	-0.5
Helpfulness												
Informal	1.5	---	-0.3	---	1.8	---	0.7	---	2.1	---	0.0	---
Formal	1.5	0.4	0.4	0.2	3.0	0.2	3.8	1.6	2.5	-0.3	1.5	1.2
Informational	2.3	1.3	1.1	0.2	1.4	-0.6	-0.3	-1.1	1.5	-2.2	0.4	0.4
Total Support	2.0	1.1	1.6	0.7	3.1	1.7	3.6	1.5	2.5	0.9	1.7	0.5

[a] Parenting Stress Index, [b] Carolina Parent Support Scale

(table continues)

Table 8 cont'd

	Mothers				Fathers				Total DD Group			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z score)		Skew (z)		Kurtosis(z)	
Variables	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Demographic												
Age of Parent[e]	0.4	---	-0.5	---	0.4	---	-0.1	----				
Age of Child[e]									0.1	---	-0.7	---
Years Married[e]									2.2	---	2.7	---
Children in home[e]									4.8	---	8.1	---
SES[e]									-0.3	---	-1.3	---

Note. Z scores for skewness obtained in each case by dividing the value for skewness by the skewness standard error. Z scores for kurtosis obtained in each case by dividing the value for kurtosis by the kurtosis standard error. z values greater than or equal to 3.5 are considered significant. Dashes indicate that transformations were not undertaken on these variables.

[c] square root transformation. [d] reflect and square root transformation. [e] transformations not undertaken as interpretation of variable would be adversely affected.

Table 9

Skewness and Kurtosis Scores for Parents of Non-Disabled Control Children on Dependent Measures (PSI), Independent Measures (CPSS), Demographic Variables, and Potential Covariates Before and After Transformations

	Mothers				**Fathers**				**Total Control Group**			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z score)		Skew (z)		Kurtosis(z)	
Variables	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
PSI[a] Domains												
Child Domain	-0.3	---	-1.1	---	-0.8	---	-0.4	---	-0.9	---	-1.1	---
Parent Domain	0.1	---	-1.4	---	1.1	---	1.3	---	0.8	---	-0.6	---
Life Stress	1.5	---	-0.1	---	2.4	---	0.5	---	2.8	---	0.3	---
Total Stress	0.4	---	-1.3	---	-0.3	---	0.1	---	0.2	---	-0.9	---
CPSS[b] Scales												
Availability												
Informal[d]	-2.4	1.8	0.3	-0.6	-5.6	5.2	7.4	6.1	-5.0	4.2	3.3	1.5
Formal[d]	0.5	-0.9	-1.7	-1.7	-1.2	0.8	-1.3	-1.8	-0.4	-0.1	-1.3	-2.5
Informational[d]	-0.8	0.5	-1.4	-1.7	-2.3	1.9	-0.0	-0.7	-2.0	1.5	-1.3	-1.9
Total Support[d]	0.1	-0.8	-1.4	-1.4	-1.3	0.9	-1.2	-1.7	-0.8	-0.0	-2.0	-2.4
Helpfulness												
Informal	1.7	---	1.1	---	0.9	---	-0.7	---	1.8	---	0.4	---
Formal[c]	2.9	0.9	2.5	0.1	1.8	-0.5	0.2	0.6	3.2	0.3	1.9	0.2
Informational[c]	2.9	-1.2	3.9	3.5	1.5	-0.8	0.5	-0.8	2.6	1.8	2.4	0.6
Total[c]	3.7	1.9	5.3	2.1	2.3	1.4	1.6	0.5	4.6	2.5	6.4	2.3

[a] Parenting Stress Index, [b] Carolina Parent Support Scale

(table continues)

Table 9 cont'd

	Mothers				Fathers				Total Control Group			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z score)		Skew (z)		Kurtosis(z)	
Variables	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Demographic												
Age of Parent[e]	-0.1	---	1.1	---	0.2	---	-0.5	---				
Age of Child[e]									-0.1	---	-1.1	---
Years Married[e]									0.9	---	2.1	---
Children in home[e]									0.3	---	-0.2	---
SES[e]									-1.3	---	-0.7	---

Note: Z scores for skewness obtained in each case by dividing the value for skewness by the skewness standard error. Z scores for kurtosis obtained in each case by dividing the value for kurtosis by the kurtosis standard error. z values greater than or equal to 3.5 are considered significant. Dashes indicate that transformations were not undertaken on these variables.

[c] square root transformation. [d] reflect and square root transformation. [e] transformations not undertaken as interpretation of variable would be adversely affected.

Table 10

Skewness and Kurtosis Scores for Parents of Total Sample (ADHD, DD, and ND Control) on Dependent Measures (PSI) Independent Measures (CPSS), Demographic Variables and Potential Covariates Before and After Transformations

	Mothers				Fathers				Total Sample			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z scr)		Skew (z)		Kurtosis (z)	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
PSI[a] Domains												
Child Domain	1.2	---	0.4	---	1.2	---	0.6	---	1.6	---	0.5	---
Parent Domain	1.5	---	0.5	---	0.2	---	-0.6	---	1.2	---	0.1	---
Life Stress	2.7	---	-0.3	---	3.4	---	1.1	---	4.5	---	1.1	---
Total Stress	1.3	---	0.4	---	0.3	---	-0.4	---	1.0	---	-0.1	---
CPSS[b] Scales												
Availability												
Informal[d]	-6.6	5.1	6.3	2.8	10.6	7.8	18.6	9.8	-11.5	8.4	15.4	7.5
Formal[d]	-1.8	1.1	-2.3	-2.6	2.6	1.8	1.4	-2.4	-2.9	1.9	-2.6	-3.2
Informational[d]	-6.5	4.9	6.3	2.1	-5.4	4.1	3.6	0.7	-8.2	6.2	6.4	1.7
Total Support[d]	2.3	1.1	-1.4	-2.4	-3.1	1.8	-0.4	-2.1	-3.7	1.9	-1.3	-3.1
Helpfulness												
Informal	1.9	---	1.0	---	1.8	---	-0.1	---	2.5	---	0.6	---
Formal[c]	3.2	0.2	2.0	-0.1	3.4	-0.8	1.6	1.2	4.5	-0.5	2.3	0.9
Informational[c]	3.6	-0.6	2.8	2.6	2.1	-1.2	-0.5	-1.3	3.3	-2.9	1.5	0.6
Total Support[c]	4.1	1.9	4.2	1.0	3.7	1.6	3.0	0.8	5.5	2.5	5.1	1.1

[a] Parenting Stress Index, [b] Carolina Parent Support Scale

(table continues)

Table 10 cont'd

	Mothers				Fathers				Total Sample			
	Skew (z score)		Kurtosis (z score)		Skew (z score)		Kurtosis (z score)		Skew (z)		Kurtosis(z)	
Variables	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Demographic												
Age of Parent[e]	0.8	---	-0.5	---	2.3	---	3.0	---	2.7	---	3.0	---
Age of Child[e]									-0.6	---	-1.5	---
Years Married[e]									1.9	---	2.5	---
Children in home[e]									6.5	---	14.6	---
SES[e]									-0.8	---	-1.6	---

Note. Z scores for skewness obtained in each case by dividing the value for skewness by the skewness standard error. Z scores for kurtosis obtained in each case by dividing the value for kurtosis by the kurtosis standard error. z values greater than or equal to 3.5 are considered significant. Dashes indicate that transformations were not undertaken on these variables.

[c] square root transformation. [d] reflect and square root transformation. [e] transformations not undertaken as interpretation of variable would be adversely affected.

Table 11

Group Comparisons of Continuous Demographic Variables

Variable	Group 1 ADHD *(N = 44)* **M**	SD	Group 2 DD *(N = 44)* **M**	SD	Group 3 Control *(N = 44)* **M**	SD	F	p
Child's age (years)	**9.55**	(1.77)	**8.50**	(2.06)	**8.68**	(1.78)	1.950	NS
Mother's age (years)	**38.59**	(6.31)	**41.41**	(6.78)	**40.09**	(5.15)	1.168	NS
Father's age (years)	**42.29**	(8.83)	**42.36**	(7.03)	**42.53**	(5.73)	.006	NS
Years Married	**12.91**	(5.76)	**14.95**	(6.59)	**14.86**	(6.46)	.738	NS
Children in Home	**2.55**	(.86)	**2.45**	(1.53)	**2.45**	(.80)	.049	NS
SES[a]	**48.45**	(9.76)	**53.82**	(9.23)	**54.73**	(9.13)	2.875	NS

[a] Calculated using Hollingshead Two Factor Index of Social Status (Hollingshead, 1975)

Table 12

Group Comparisons of Categorical Demographic Variables

Variable[a]	N	χ^2	p
Ethnicity	129	22.83	.004
Gender of Child	66	4.82	.09
Step-Parent	132	1.05	.59
Income	65	8.10	.08
Education	131	9.20	.513

[a] Please refer to Table 6, Frequency Distribution of Demographic Variables for information on the frequencies of the above variables.

Table 13

Parenting Stress Index (PSI) Domain Scores (Means, Standard Deviations, and F Ratios) by Disability Group and Gender of Parent

	Group 1 ADHD		Group 2 DD		Group 3 Control		F Ratios			Group Comparisons
	Mo	Fa	Mo	Fa	Mo	Fa	Group	Parent	Group X Parent	
PSI Scales	*n= 22*	*n=22*	*n=22*	*n=22*	*n=22*	*n=22*	*df =2,63*	*df =1,63*	*df= 2, 63*	
Child Domain										
M	**132.23**	**125.64**	**117.59**	**117.64**	**95.23**	**93.23**	**22.87****	**1.11**	**.53**	1=2, 1>3, 2>3
SD	*21.83*	*22.89*	*19.88*	*21.90*	*18.49*	*17.65*				
Parent Domain										
M	**124.73**	**126.18**	**123.55**	**113.91**	**113.27**	**108.68**	**3.65***	**1.27**	**.72**	1>2, 1>3, 2=3
SD	*23.08*	*22.77*	*24.94*	*24.67*	*23.92*	*21.39*				
Life Stress										
M	**6.50**	**7.55**	**8.77**	**8.95**	**6.14**	**5.77**	**1.44**	**.14**	**.28**	
SD	*5.27*	*6.69*	*7.21*	*8.18*	*5.48*	*6.05*				

Note DD = developmentally disabled children. Mo = Mother and Fa = Father.

- $p < .05$; ** $p < .0001$

Table 14

PSI Child Domain Subscale Scores (Means, Standard Deviations, and F Ratios) by Disability Group and Gender of Parent

	Group 1 ADHD		Group 2 DD		Group 3 Control		F Ratios			Group Comparisons
	Mo	Fa	Mo	Fa	Mo	Fa	Group	Parent	Group X Parent	
	n= 22	*n=22*	*n=22*	*n=22*	*n=22*	*n=22*	*df =2,63*	*df =1,63*	*df= 2, 63*	
Child Domain										
Distractibility/ Hyperactivity										
M	**32.59**	**30.77**	**26.95**	**27.50**	**21.64**	**21.59**	**32.89****	**.49**	**1.30**	1>2, >3, 2>3
SD	*4.90*	*5.14*	*5.84*	*4.46*	*4.22*	*4.32*				
Adaptability										
M	**33.18**	**30.77**	**29.23**	**28.00**	**24.36**	**23.36**	**10.87****	**4.01[a]**	**.32**	1=2, 1>3, 2>3
SD	*6.40*	*6.67*	*7.28*	*6.86*	*6.08*	*6.16*				
Reinforces Parent										
M	**12.36**	**12.45**	**8.95**	**10.73**	**9.36**	**10.18**	**9.04****	**2.21**	**.66**	1>2, 1>3, 2=3
SD	*4.05*	*3.46*	*2.79*	*3.84*	*2.90*	*3.06*				

Note DD = developmentally disabled children. Mo = Mother and Fa = Father. [a] This univariate effect for parent was found in the absence of a multivariate effect and should be interpreted with caution, $p < .05$; Mo > Fa. * $p < .05$; ** $p < .001$; ***$p < .0001$

Table 14 Cont'd

PSI Child Domain Subscale Scores (Means, Standard Deviations, and F Ratios) by Disability Group and Gender of Parent

	Group 1 ADHD		Group 2 DD		Group 3 Control		F Ratios			Group Comparisons
	Mo	Fa	Mo	Fa	Mo	Fa	Group	Parent	Group X Parent	
	n= 22	*n=22*	*n=22*	*n=22*	*n=22*	*n=22*	*df =2,63*	*df =1,63*	*df= 2, 63*	
Child Domain										
Demandingness										
M	**24.95**	**22.64**	**23.73**	**22.68**	**17.09**	**17.00**	**14.77*** **	**2.63**	**.83**	1=2, 1>3; 2>3
SD	*7.14*	*5.39*	*4.45*	*6.77*	*3.84*	*3.77*				
Mood										
M	**13.59**	**12.86**	**9.73**	**10.68**	**10.64**	**9.59**	**7.80****	**.36**	**1.88**	1>2, 1>3, 2=3
SD	*4.25*	*3.68*	*3.19*	*3.26*	*3.54*	*2.91*				
Acceptability										
M	**16.23**	**16.14**	**19.00**	**19.05**	**12.14**	**11.50**	**23.11*** **	**.15**	**.13**	1>2, 1>3, 2>3
SD	*4.80*	*4.06*	*3.42*	*5.19*	*4.50*	*3.31*				

Note DD = developmentally disabled children. Mo = Mother and Fa = Father.
* $p < .001$

Table 15

PSI Parent Domain Subscale Scores (Means, Standard Deviations, and F Ratios) by Disability Group and Gender of Parent

	Group 1 ADHD		Group 2 DD		Group 3 Control		F Ratios			Group Comparisons
	Mo	Fa	Mo	Fa	Mo	Fa	Group	Parent	Group X Parent	
	n= 22	*n=22*	*n=22*	*n=22*	*n=22*	*n=22*	*df =2,63*	*df =1,63*	*df= 2, 63*	
Parent Domain										
Competence										
M	**28.82**	**29.55**	**30.09**	**27.05**	**26.23**	**24.36**	**3.97[a]**	**2.31**	**1.48**	1=2, 1>3; 2>3
SD	*6.41*	*7.44*	*6.53*	*4.90*	*6.13*	*5.25*				
Isolation										
M	**14.59**	**15.09**	**13.73**	**12.68**	**12.50**	**11.91**	**4.17[b]**	**.353**	**.52**	1>2, 1>3, 2=3
SD	*3.74*	*3.70*	*4.76*	*4.06*	*4.09*	*3.57*				
Attachment										
M	**12.32**	**14.82**	**10.50**	**13.32**	**12.59**	**13.05**	**2.53**	**12.90****	**1.91**	Fa > Mo
SD	*3.71*	*4.02*	*1.95*	*3.62*	*3.17*	*2.77*				
Health										
M	**12.45**	**11.95**	**13.41**	**11.05**	**11.18**	**10.95**	**2.15**	**3.54**	**1.50**	
SD	*3.61*	*2.90*	*3.97*	*2.61*	*2.89*	*2.06*				

Note DD = developmentally disabled children. Mo = Mother and Fa = Father. * p < .05; ** p <.001; ***p <.0001

Table 15 Cont'd

Parenting Stress Parent Domain Subscale Scores (Means, Standard Deviations, and F Ratios) by Disability Group and Gender of Parent

	Group 1 ADHD		Group 2 DD		Group 3 Control		F Ratios			Group Comparison
	Mo	Fa	Mo	Fa	Mo	Fa	Group	Parent	Group X Parent	
	n= 22	*n=22*	*n=22*	*n=22*	*n=22*	*n=22*	*df =2,63*	*df =1,63*	*df= 2, 63*	
Parent Domain										
Role Restriction										
M	**18.18**	**16.68**	**18.59**	**15.82**	**16.68**	**15.88**	**.99**	**8.33****	**.39**	Mo > Fa
SD	*3.75*	*3.54*	*6.76*	*5.56*	*3.81*	*4.11*				
Depression										
M	**20.23**	**19.95**	**21.05**	**17.82**	**19.09**	**17.64**	**1.21**	**3.57**	**.97**	
SD	*5.08*	*5.36*	*6.05*	*4.98*	*4.65*	*4.56*				
Spouse										
M	**18.23**	**18.14**	**16.77**	**16.32**	**17.09**	**15.50**	**1.65**	**1.13**	**.45**	
SD	*5.17*	*4.22*	*4.36*	*5.01*	*4.92*	*3.94*				

Note DD = developmentally disabled children. Mo = Mother and Fa = Father. [a] This univariate effect for group was found in the absence of a multivariate effect and should be interpreted with caution, $p < .05$; 1 = 2, 1 >3, 2 >3. [b] This univariate effect for group was found in the absence of a multivariate effect and should be interpreted with caution, $p < .05$; 1 = 2, 1 >3, 2 >3.
* $p < .05$; **$p < .005$; ***$p < .001$

Table 16

Correlations between Independent Variables and Parenting Stress Scores for Mothers and Fathers

	Child Domain				Parent Domain		Total Stress	
Variable	Mothers	(*n*)	Fathers	(*n*)	Mothers (n^a)	Fathers (n^a)	Mothers (n^a)	Fathers(n^a)
Parent/family characteristics								
Age of Parent	-.11	*(66)*	-.10	*(62)*	-.18	.00	-.15	-.05
Years married	-.05	*(65)*	-.22	*(65)*	-.15	-.24	-.11	-.24
Number of children in home	.04	*(66)*	-.05	*(66)*	-.04	-.06	-.00	-.07
SES	-.28*	*(66)*	-.21	*(66)*	-.19	-.14	-.25*	-.19
Child Characteristics								
Disability[d]	.58***	*(66)*	.54***	*(66)*	.21	-.23	.45***	.42***
Age of child	-.08	*(66)*	.05	*(66)*	-.32*	.02	.22	.03
Social Support								
Availability								
Informal[b]	-.22	*(66)*	-.00	*(65)*	-.09	.12	-.17	.06
Formal[b]	-.07	*(66)*	-.07	*(65)*	-.05	-.11	-.07	-.10
Informational[b]	.00	*(66)*	-.00	*(65)*	.06	-.10	.03	-.06
Total[b]	-.09	*(66)*	-.04	*(65)*	-.03	-.08	-.07	-.07

(table continues)

Table 16 cont'd

Variable	Child Domain		Parent Domain		Total Stress	
	Mothers (*n*)	Fathers (*n*)	Mothers (n^a)	Fathers (n^a)	Mothers (n^a)	Fathers(n^a)
Social Support Helpfulness						
Informal	-.36** *(66)*	-.39** *(65)*	-.53***	-.44***	-.49***	-.43***
Formal[c]	-.06 *(66)*	-.10 *(65)*	-.15	-.17	-.11	-.16
Informational[c]	-.18 *(66)*	-.19 *(65)*	-.23	-.21	-.23	-.23
Total[c]	-.28* *(66)*	-.36** *(65)*	-.39***	-.41**	-.37***	-.41**

[a] Sample size the same as listed under child domain for mothers and fathers. [b] These variables underwent reflection with square root transformation. [c] These variables underwent square root transformation. [d] This variable coded as 0 for parents of children without disabilities and 1 for parents of children with disabilities. * p < .05; ** p < .005; *** p < . 0001. Note, 2-tailed significance used.

Table 17

Social Support Scores by Disability Group and Gender of Parent

	ADHD		DD		Control		Total	
	Mo	Fa	Mo	Fa	Mo	Fa	Mo	Fa
	n= 22	*n=22*	*n=22*	*n=22*	*n=22*	*n=21*	*n=66*	*n=65*
Availability								
Informal								
M	**6.64**	**6.64**	**6.64**	**6.59**	**6.0**	**6.48**	**6.42**	**6.57**
SD	*.79*	*.73*	*.49*	*.59*	*1.35*	*1.36*	*.98*	*.93*
Formal								
M	**6.0**	**5.68**	**6.41**	**6.45**	**4.86**	**5.95**	**5.76**	**6.03**
SD	*2.62*	*2.59*	*1.92*	*2.22*	*2.46*	*2.42*	*2.41*	*2.40*
Informational								
M	**5.18**	**4.86**	**5.68**	**5.45**	**5.05**	**5.33**	**5.30**	**5.22**
SD	*1.59*	*1.42*	*.78*	*1.22*	*1.00*	*.97*	*1.19*	*1.23*
Total								
M	**17.82**	**17.18**	**18.73**	**18.50**	**15.91**	**17.76**	**17.48**	**17.82**
SD	*3.94*	*4.27*	*2.81*	*3.47*	*3.98*	*3.91*	*3.75*	*3.88*
Helpfulness								
Informal								
M	**10.77**	**13.05**	**15.23**	**14.23**	**13.32**	**13.71**	**13.11**	**13.66**
SD	*4.28*	*4.48*	*4.99*	*5.33*	*5.10*	*4.53*	*5.08*	*4.75*
Formal								
M	**6.64**	**7.27**	**10.91**	**8.09**	**7.50**	**7.43**	**8.35**	**7.60**
SD	*3.50*	*4.90*	*4.55*	*4.84*	*5.89*	*5.19*	*5.03*	*4.91*
Informational								
M	**6.64**	**5.91**	**9.00**	**4.55**	**7.68**	**5.62**	**7.77**	**5.35**
SD	*3.96*	*4.37*	*3.96*	*4.08*	*4.58*	*4.80*	*4.23*	*4.39*
Total								
M	**24.05**	**26.23**	**35.14**	**26.86**	**28.50**	**26.76**	**29.23**	**26.62**
SD	*8.98*	*11.10*	*10.12*	*11.96*	*13.61*	*10.00*	*11.84*	*10.90*

Note Mo = Mother and Fa = Father, DD = Developmentally Disabled. These scores represent before transformation values.

Table 18

Summary of Hierarchical Multiple Regression Predicting Mothers Parenting Stress Index (PSI) Child Domain Scores from Diagnostic Category, Demographic Variables, and Perceived Helpfulness of Social Support (n = 66)

Independent Variables	R	R^2	ΔR^2	p
Step 1				
Disability[a]	.58	.34	.34***	.0001
Step 2				
Age of Parent	--	---	---	--
Age of Child	--	---	---	--
Years Married	--	---	---	--
Children in Home	--	---	---	--
SES	--	---	---	--
Step 3				
Helpfulness of Informal Support	.68	.46	.12**	.001

[a] A dichotomous variable where 0 = non-disabled, 1 = ADHD or Developmentally Disabled. Dashes indicate that data are not available, as values in these columns are calculated only for those variables that entered the final solution. ** $p < .001$; *** $p < .0001$. Note. p values refer to incremental significance at each step

Table 19

Summary of Hierarchical Multiple Regression Predicting Mothers' Parenting Stress Index (PSI) Parent Domain Scores from Diagnostic Category, Demographic Variables, and Perceived Helpfulness of Social Support (n = 66)

Independent Variables	R	R^2	ΔR^2	p
Step 1				
Disability[a]	.22	.05	.05	.03
Step 2				
Age of Parent	---	---	---	
Age of Child	.40	.16	.11*	.02
Years Married	---	---	---	
Children in Home	---	---	---	
SES	---	---	---	
Step 3				
Helpfulness of Informal Support	.61	.38	.22***	.0001

[a] A dichotomous variable where 0 = non-disabled, 1 = ADHD or Developmentally Disabled. Dashes indicate that data are not available, as values in these columns are calculated only for those variables that entered the final solution. * $p < .05$; ** $p < .0001$. Note. p values refer to incremental significance at each step

Table 20

Summary of Hierarchical Multiple Regression Predicting Fathers' Parenting Stress Index (PSI) Child Domain Scores from Diagnostic Category, Demographic Variables, and Perceived Helpfulness of Social Support (n = 66)

Independent Variables	R	R^2	ΔR^2	p
Step 1				
Disability[a]	.54	.30	.30***	.0001
Step 2				
Age of Parent	---	---	---	
Age of Child	---	---	---	
Years Married	---	---	---	
Children in Home	---	---	---	
SES	---	---	---	
Step 3				
Helpfulness of Informal Support	.66	.44	.14***	.0001

[a] A dichotomous variable where 0 = non-disabled, 1 = ADHD or Developmentally Disabled. Dashes indicate that data are not available, as values in these columns are calculated only for those variables that entered the final solution. *** $p < .0001$. Note. p values refer to incremental significance at each step

Table 21

Summary of Hierarchical Multiple Regression Predicting Fathers' Parenting Stress Index (PSI) Parent Domain Scores from Diagnostic Category, Demographic Variables, and Perceived Helpfulness of Social Support (n = 66)

Independent Variables	R	R^2	ΔR^2	p
Step 1				
Disability[a]	.23	.05	.05	
Step 2				
Age of Parent	---	---	---	
Age of Child	---	---	---	
Years Married	---	---	---	
Children in Home	---	---	---	
SES	---	---	---	
Step 3				
Helpfulness of Informal Support	.49	.24	.19**	.0001

[a] A dichotomous variable where 0 = non-disabled, 1 = ADHD or Developmentally Disabled. Dashes indicate that data are not available, as values in these columns are calculated only for those variables that entered the final solution. ** $p < .0001$. Note. p values refer to incremental significance at each step

Table 22

Descriptive Statistics for Mothers' Parental Role Items for Each Age and Role by Group

Bonding

Age Group	ADHD[a] (n=22) M (SD)	DD[b] (n=22) M (SD)	Control (n=21) M (SD)	Total (n=65) M (SD)
Infant/Toddler	1.27 (.70)	1.23 (.43)	1.57 (.87)	1.35 (.69)
Preschool	2.18 (1.74)	3.23 (1.90)	2.19 (1.63)	2.54 (1.80)
Elementary	2.95 (1.91)	3.32 (2.25)	2.76 (2.00)	3.02 (2.04)

Discipline

Age Group	ADHD (n=22) M (SD)	DD (n=22) M (SD)	Control (n=21) M (SD)	Total (n=65) M (SD)
Infant/Toddler	5.18 (1.10)	4.95 (1.36)	4.95 (1.12)	5.03 (1.19)
Preschool	4.09 (1.60)	3.27 (1.64)	3.90 (1.18)	3.75 (1.51)
Elementary	3.73 (1.72)	3.32 (1.46)	3.57 (1.21)	3.54 (1.47)

Education

Age Group	ADHD (n= 22) M (SD)	DD (n=22) M (SD)	Control (n =21) M SD	Total (n=65) M SD
Infant/Toddler	5.14 (.94)	5.14 (.89)	5.38 (.92)	5.22 (.91)
Preschool	4.59 (1.40)	4.23 (1.57)	4.90 (1.22)	4.57 (1.41)
Elementary	3.41 (1.74)	3.45 (1.68)	3.81 (1.54)	3.55 (1.64)

(table continues)

Table 22 cont'd

Protection and General Welfare

Age Group	ADHD (n= 22) M (SD)	DD (n=22) M (SD)	Control (n=21) M (SD)	Total (n=65) M (SD)
Infant/Toddler	2.50 (1.19)	2.64 (1.40)	1.81 (.87)	2.32 (1.21)
Preschool	2.36 (1.47)	2.59 (1.79)	2.05 (1.24)	2.34 (1.51)
Elementary	3.18 (1.65)	3.18 (1.76)	2.19 (1.57)	2.86 (1.70)

Responsivity

Age Group	ADHD (n= 22) M (SD)	DD (n=22) M (SD)	Control (n=21) M SD	Total (n=65) M SD
Infant/Toddler	3.45 (1.06)	3.09 (.81)	3.43 (1.03)	3.32 (.97)
Preschool	3.64 (1.50)	3.55 (1.41)	4.00 (1.41)	3.72 (1.43)
Elementary	3.55 (1.63)	3.73 (1.52)	4.57 (1.29)	3.94 (1.53)

Sensitivity

Age Group	ADHD (n= 22) M (SD)	DD (n= 22) M (SD)	Control (n =22) M SD	Total (n=65) M SD
Infant/Toddler	3.59 (.96)	3.95 (1.13)	3.86 (.85)	3.80 (.99)
Preschool	4.14 (1.08)	4.00 (1.51)	3.95 (1.60)	4.03 (1.39)
Elementary	4.18 (1.53)	3.86 (1.49)	4.10 (1.55)	4.05 (1.50)

[a] Attention Deficit Hyperactivity Disorder Group, [b] Developmentally Disabled Group

Table 23

Descriptive Statistics for Fathers' Parental Role Items for Each Age and Role by Group

Bonding

Age Group	ADHD[a] (n= 22) M (SD)	DD[b] (n= 20) M (SD)	Control (n=20) M (SD)	Total (n=62) M (SD)
Infant/Toddler	1.77 (1.11)	1.85 (1.53)	1.70 (1.13)	1.77 (1.25)
Preschool	2.36 (1.53)	2.85 (1.98)	1.90 (.79)	2.37 (1.54)
Elementary	3.33 (1.88)	3.57 (1.78)	2.80 (1.40)	3.24 (1.71)

Discipline

Age Group	ADHD (n= 22) M (SD)	DD (n= 20) M (SD)	Control (n =20) M (SD)	Total (n=62) M (SD)
Infant/Toddler	5.45 (.91)	4.40 (1.54)	4.75 (1.33)	4.89 (1.33)
Preschool	4.23 (1.54)	3.70 (1.75)	3.75 (1.80)	3.90 (1.69)
Elementary	3.19 (1.60)	3.05 (1.53)	3.75 (1.52)	3.32 (1.56)

Education

Age Group	ADHD (n= 22) M (SD)	DD (n=20) M (SD)	Control (n=20) M (SD)	Total (n=62) M (SD)
Infant/Toddler	4.73 (.88)	4.90 (1.37)	5.30 (.80)	4.97 (1.06)
Preschool	3.95 (1.46)	4.20 (1.54)	4.60 (1.43)	4.24 (1.48)
Elementary	2.77 (1.34)	2.95 (1.36)	3.15 (1.76)	2.95 (1.47)

(table continues)

Table 23 cont'd

Protection and General Welfare

Age Group	ADHD(n=22) M (SD)	DD(n=20) M (SD)	Control (n = 20) M SD	Total (n= 64) M SD
Infant/Toddler	1.95 (.95)	2.70 (1.38)	1.90 (1.17)	2.18 (1.21)
Preschool	2.00 (1.27)	2.70 (1.38)	2.70 (1.78)	2.45 (1.50)
Elementary	2.86 (1.67)	2.81 (1.94)	2.90 (1.74)	2.86 (1.76)

Responsivity

Age Group	ADHD(n= 22) M (SD)	DD(n=20) M (SD)	Control (n = 20) M (SD)	Total (n= 62) M (SD)
Infant/Toddler	3.55 (1.14)	3.45 (1.15)	3.65 (.93)	3.55 (1.07)
Preschool	4.05 (1.43)	3.50 (1.73)	4.05 (1.28)	3.87 (1.49)
Elementary	4.29 (1.42)	4.29 (1.42)	4.05 (1.50)	4.39 (1.75)

Sensitivity

Age Group	ADHD(n=22) M (SD)	DD(n=20) M (SD)	Control (n = 20) M SD	Total (n= 62) M SD
Infant/Toddler	3.14 (1.46)	3.70 (1.17)	3.70 (1.13)	3.50 (1.28)
Preschool	4.23 (1.63)	4.10 (1.45)	4.00 (1.56)	4.11 (1.53)
Elementary	4.33 (1.74)	4.48 (1.69)	4.35 (1.90)	4.39 (1.75)

[a] Attention Deficit Hyperactivity Disorder Group, [b] Developmentally Disabled Group

Table 24

Descriptive Statistics for Mothers and Fathers' View of Overall Importance of Parental Role Characteristics

	Mothers			
	ADHD[a] M (SD)	DD[b] M (SD)	Control M (SD)	Total M (SD)
Bonding	1.68 (1.25)	1.81 (1.33)	2.14 (2.76)	1.88 (1.39)
Discipline	4.27 (1.39)	3.76 (1.37)	3.76 (1.41)	3.94 (1.39)
Education	4.18 (1.33)	4.67 (1.32)	4.61 (1.17)	4.55 (1.28)
Protection	2.50 (1.44)	2.76 (1.58)	2.14 (1.24)	2.47 (1.43)
Responsivity	4.32 (1.52)	3.81 (1.33)	4.24 (1.26)	4.12 (1.37)
Sensitivity	3.91 (1.38)	4.05 (1.72)	3.86 (1.65)	3.94 (1.56)

	Fathers			
	ADHD[a]	DD[b]	Control	Total
Bonding	2.00 (1.34)	2.57 (1.57)	2.00 (1.08)	2.19 (1.42)
Discipline	4.10 (1.22)	3.86 (1.62)	3.45 (1.39)	3.81 (1.42)
Education	4.05 (1.17)	3.29 (1.45)	3.95 (1.50)	3.76 (1.40)
Protection	2.18 (1.50)	2.81 (1.91)	2.55 (1.67)	2.51 (1.69)
Responsivity	4.33 (1.43)	4.05 (1.56)	4.60 (1.23)	4.32 (1.41)
Sensitivity	4.19 (1.86)	4.43 (1.50)	4.45 (1.73)	4.35 (1.68)

[a] Attention Deficit Hyperactivity Disorder Group, [b] Developmentally Disabled Group

Table 25

Comparison of Mothers and Fathers Parental Role Ranks Across Groups

Characteristic	Mean Rank	Kruskal Wallis Statistic	p
Mothers' Ranks			
Bonding	1	.0	NS
Discipline	1	4.2	NS
Education	1	4.3	NS
Protection	1	.6	NS
Responsivity	1	2.3	NS
Sensitivity	1	.0	NS
N	66		
Fathers'Ranks			
Bonding	1	2.1	NS
Discipline	1	2.5	NS
Education	1	1.1	NS
Protection	1	.5	NS
Responsivity	1	.6	NS
Sensitivity	1	1.5	NS
N	66		

Table 26

Frequency Distribution of Responses to Importance of Parental Role Characteristics for Mothers by Group

	ADHD[a]					DD[b]				
Scale	Very Much	Some	Not Sure	Little	Not Much	Very Much	Some	Not Sure	Little	Not Much
Bonding	22 (100%)	0	0	0	0	22 (100%)	0	0	0	0
Discipline	17 (77%)	5 (23%)	0	0	0	21 (96%)	1 (5%)	0	0	0
Education	20 (91%)	2 (9%)	0	0	0	18 (82%)	4 (18%)	0	0	0
Protection	21 (96%)	1 (5%)	0	0	0	21 (96%)	1 (5%)	0	0	0
Responsivity	18 (82%)	4 (18%)	0	0	0	19 (86%)	3 (14%)	0	0	0
Sensitivity	19 (86%)	3 (14%)	0	0	0	19 (86%)	2 (9%)	1(5%)	0	0
n		22						22		

(table continues)

Table 26 cont'd

Frequency Distribution of Responses to Importance of Parental Role Characteristics for Mothers by Group

	Control					All Mothers				
Scale	Very Much	Some	Not Sure	Little	Not Much	Very Much	Some	Not Sure	Little	Not Much
Bonding	22 (100%)	0	0	0	0	66 (100%)	0	0	0	0
Discipline	16 (73%)	6(27%)	0	0	0	54 (82%)	12(18%)	0	0	0
Education	22 (100%)	0	0	0	0	60 (91%)	6 (9%)	0	0	0
Protection	20 (91%)	1 (5%)	1(5%)	0	0	62 (94%)	3 (4%)	1 (2%)	0	0
Responsivity	15 (68%)	7 (32%)	0	0	0	52 (79%)	14 (21%)	0	0	0
Sensitivity	19 (86%)	3 (14%)	0	0	0	57 (86%)	8 (12%)	1 (2%)	0	0
n		22					66			

[a] Attention Deficit Hyperactivity Disorder, [b] Developmentally Disabled

Table 27

Frequency Distribution of Responses to Importance of Parental Role Characteristics for Fathers by Group

	ADHD[a]					DD[b]				
Scale	Very Much	Some	Not Sure	Little	Not Much	Very Much	Some	Not Sure	Little	Not Much
Bonding	21 (96%)	1 (5%)	0	0	0	20 (91%)	2 (9%)	0	0	0
Discipline	16 (73%)	4 (18%)	1(5%)	1(5%)	0	14 (64%)	8 (36%)	0	0	0
Education	20 (91%)	2 (9%)	0	0	0	19 (86%)	3 (14%)	0	0	0
Protection	21 (96%)	1 (5%)	0	0	0	20 (91%)	2 (9%)	0	0	0
Responsivity	18 (82%)	3 (14%)	1(5%)	0	0	18 (82%)	4 (18%)	0	0	0
Sensitivity	15 (68%)	5 (23%)	1(5%)	1(5%)	0	15 (68%)	7 (32%)	0	0	0
n		22					22			

(table continues)

Table 27 cont'd

Frequency Distribution of Responses to Importance of Parental Role Characterstics for Fathers by Group

	Control					All Fathers				
Scale	Very Much	Some	Not Sure	Little	Not Much	Very Much	Some	Not Sure	Little	Not Much
Bonding	22 (100%)	0	0	0	0	63 (96%)	3 (5%)	0	0	0
Discipline	19 (86%)	2 (9%)	1(5%)	0	0	49 (74%)	14 (21%)	2(3%)	1(2%)	0
Education	21 (96%)	1 (5%)	0	0	0	60 (91%)	6 (9%)	0	0	0
Protection	20 (91%)	1 (5%)	1(5%)	0	0	61 (92%)	4 (6%)	1(2%)	0	0
Responsivity	16 (73%)	6 (27%)	0	0	0	52 (79%)	13 (20%)	1(2%)	0	0
Sensitivity	18 (82%)	4 (18%)	0	0	0	48 (73%)	16 (24%)	1(2%)	1(2%)	0
n	22					66				

[a] Attention Deficit Hyperactivity Disorder, [b] Developmentally Disabled

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