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## The Mediating Effect of Sibling Warmth on Parental Stress in Families with Children Who Have Attention Deficit Hyperactivity Disorder

Jessica Sarah Huber



THE FLORIDA STATE UNIVERSITY  
COLLEGE OF HUMAN SCIENCES

THE MEDIATING EFFECT OF SIBLING WARMTH ON PARENTAL  
STRESS IN FAMILIES WITH CHILDREN WHO HAVE ATTENTION  
DEFICIT HYPERACTIVITY DISORDER

By

JESSICA SARAH HUBER

A Dissertation submitted to the  
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The members of this committee approve the dissertation of Jessica Sarah Huber defended on March 26, 2010.

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Carol A. Darling  
Professor Directing Dissertation

---

F. Donald Kelly  
University Representative

---

Christine A. Readdick  
Committee Member

Received:

---

B. Kay Pasley, Chair, Department of Family and Child Sciences

---

Billie J. Collier, Dean, College of Human Sciences

The Graduate School has verified and approved the above-named committee members.

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## ABSTRACT

Parents of children who have Attention Deficit Hyperactivity Disorder (ADHD) often face many challenges in managing their children's behavior and stabilizing family functioning. As such, it has often been reported that these parents experience higher levels of parenting stress than parents of children who do not have disabilities. The purpose of this study was to explore the factors that help parents cope with this added stress and to determine the overall impact that parenting stress factors have on quality of life. This study examined the interaction between several aspects related to parenting stress and quality of life among mothers of children who have ADHD. Using the ABC-X model from family stress theory, the influences of parenting daily hassles, family coping, sibling warmth, parenting stress, and sense of coherence were examined for their predictive qualities in determining quality of life for mothers of children who have ADHD.

The participants were asked to complete an online survey consisting of demographic questions and measurements of each of the variables. The following instruments were used to assess the variables: Parenting Daily Hassles Scale for parenting daily hassles, Family Crisis Oriented Personal Evaluation Scales for family coping, Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire for sibling warmth, Parental Stress Scale for parenting stress, Orientation to Life Scale for sense of coherence, and Satisfaction with Life Scale for quality of life. Parents were recruited for this study from online and face-to-face support groups, web-based discussion boards, online parent newsletters, and practitioner offices. A total of 114 mothers and fathers completed the survey. The final sample consisted of 103 mothers.

The analysis was conducted using path analysis with AMOS 17.0 software. Overall, the model fit well with the observed data and thus supported the research question for this study; specifically, parenting daily hassles, family coping, sibling warmth, parenting stress, and sense of coherence can be integrated to predict quality of life for mothers of children who have ADHD. This model explained 19% of the variance in quality of life. For the participants in this study, sense of coherence had the greatest total effect on quality of life, followed by family coping, and parenting stress. Sibling

warmth was not found to have a direct relationship with quality of life, but did have an overall effect when mediated by sense of coherence and parenting stress.

Pertinent related findings were also discussed relevant to commonly used coping strategies, most frequent and intense parenting daily hassles, and top concerns in the sibling relationship. Mothers in the study used passive coping strategies most often in dealing with stressors, and employed more internal coping methods than external coping methods. Mothers were most concerned with and wanted the most help in dealing with arguments, anger, and hostility in the sibling relationship.

An exploration of the qualitative parental responses revealed that parents were concerned about their own frustration and difficulty in managing ADHD behaviors and access to support systems. In addition, parents expressed a lack of understanding of ADHD by the schools and communities that serve their families. Parents also commented on the impact that raising a child with ADHD has on marital and sibling relationships. Finally, certain parents who were also diagnosed with ADHD discussed the implications of their ADHD symptomatology on parenting skills and family management.

The findings confirmed the appropriateness of the ABC-X model for studying stress, resources, and appraisal mechanisms in mothers of children who have ADHD. Future research should focus on the inclusion of fathers and expanding the exploration of multiple dimensions of the sibling relationship. Due to its importance in this study, sense of coherence warrants further exploration to determine what factors contribute to parents having a high or low sense of coherence. For professional practice, support group access and school-parent communication needs to be improved. Specific training on ADHD interventions for teachers and practitioners was suggested to improve service delivery for children and families.

## CHAPTER ONE

### INTRODUCTION

#### Background of the Problem

Parenting can be considered one of the most rewarding, as well as one of the most challenging jobs a person faces. Being a parent can be stressful in dealing with all of the typical demands of child rearing. However, parents who are raising children with Attention Deficit Hyperactivity Disorder (ADHD) face additional parenting challenges. These families not only have to meet general societal demands, but also have to develop new interventions at home, at school, and at any family outing to meet these increased caretaking demands (Barkley, Anastopoulos, Guevremont, & Fletcher, 1992). Parents who have children with ADHD report higher levels of physical, psychological, and social strains (Lange et al., 2005). However, the extent of stress that parents face as a result of these demands is dependent on a number of variables, as described in Hill's ABCX model of family stress (Hill, 1949). A family's perception of having a child with ADHD, the characteristics of the family, the family's resources, and the family's coping strategies are all factors that influence the amount of stress that a family experiences.

In the past, researchers studying the area of parenting children with disabilities have focused on the negative impact that added challenges have on family functioning (Bailey & Simeonsson, 1988; Kazak & Marvin, 1984; Longo & Bond, 1984; Wikler, Wasow, & Hatfield, 1983). Families will inevitably be in some state of distress because of the negative aspects of the disability. However, this view may lead to stereotyping a family of a child with a disability as a family that is in a constant state of disorganization and dysfunction. In demonstrating this danger of stereotyping families, Sloper and Turner (1993) found that investigators tended to predict more negative effects on families than parents' own responses indicate. Although parents do legitimately experience stress and anxiety, current researchers are shifting away from the viewpoint of examining only the difficulties that caregivers face to now focusing on family strengths and successful adaptive functioning (Alriksson-Schmidt, Wallander, & Biasini, 2007; Giallo & Gavidia-Payne, 2006; Heiman, 2002; Judge, 1998). These strengths are

considered resources in dealing with stress and make families more resilient and adaptable to the many challenges that they will face. This study sought to explore these resources and the overall experience of stress and resiliency in families of children with ADHD.

The importance of studying families with children who have ADHD is evident in the prevalence of this disability. The National Institute of Mental Health (2006) has estimated that between three and five percent of children in the United States have ADHD. This percentage translates to approximately 2 million, which is roughly one in every 25 to 30 children. With the large number of children who are diagnosed with ADHD, numerous families benefit from an increased knowledge base of characteristics related to children with ADHD and behavior management strategies. Research on families of children with ADHD may assist families in understanding not only how to help the child with ADHD, but also how to maintain family functioning and understand a disability within the context of the family.

Researchers studying children with ADHD tend to focus on child-specific variables of the child with the disability (Martel & Nigg, 2006; Mrug, Hoza, Pelham, Gnagy, & Greiner, 2007). In comparison, few researchers examine family variables within this context. Within these studies, most researchers have focused on maternal attitudes (McLaughlin & Harrison, 2006), parenting (McKee, Harvey, Danforth, Ulaszek, & Friedman, 2004) and parent-child interactions (Johnston, 1996). In particular, it is the relationship between the child with ADHD and the mother that is mostly studied in parent-child relations.

In addition to the mother and father, siblings also play an important role in family dynamics, and in alternatively, family dynamics play an important role in the experience and development of the siblings. When sibling relationships are examined, researchers tend to focus on the individual characteristics of sibling relationship dynamics (McGuire, Manke, Eftekhari, & Dunn, 2000; Pike, Coldwell, & Dunn, 2005; Yeh & Lempers, 2004). However, as siblings exist within the context of families, the family environment and family processes are also shaped and influenced by sibling interactions. One common family process is a family's experience with stress. Whereas researchers have described how spousal relationship qualities affect the resiliency of families dealing with

stress (Belsky, Crnic, & Gable, 1995; McCarthy, Cuskelly, van Kraayenoord, & Cohen, 2006), less is known about the sibling relationship's influence on family stress and resiliency. Thus, further research is warranted on the mediating effect the sibling relationship may have on a family's experience with stress.

When examining siblings, researchers tend to focus more on the negative aspects of sibling relationships, such as sibling conflict (e.g., Criss & Shaw, 2005), as opposed to the positive prosocial aspects of sibling relationship, such as sibling warmth (e.g., Lockwood, Kitzmann, & Cohen, 2001). Yet, determining the prosocial aspects of family relationships may help in understanding what protective factors contribute to the positive outcomes in dealing with stress. Insight on these protective factors may help families replicate what other families are doing right instead of telling families what they are doing wrong and not giving them the tools on how to improve family functioning. The supportive factors of families can further strengthen families' abilities to be adaptable to the many challenges, both normative and non-normative, that they face.

When looking specifically at families of children with ADHD, few researchers have studied the siblings who do not have ADHD or the sibling relationship (e.g., Jones, Welsh, Glassmire, & Tavegia, 2006; Smith, Brown, Bunke, Blount, & Christophersen, 2002). In addition, the contributions of the sibling relationship to stress and resiliency in families with children who have ADHD are yet unexamined. Since increased exploration of the sibling relationship within families who have children with ADHD appears needed, the mediating role that sibling warmth plays on parental stress in families with children who have ADHD was explored in this study.

### Theoretical Perspectives

Two major theoretical frameworks were foundational to the present study. These frameworks were combined in order to better understand the processes and predictors of parental stress in families of children with ADHD. The main theory used in this study was family stress theory. In order to further explain family stress within the context of family relationships, the researcher also used the family ecological perspective as the secondary theoretical framework.

### Family Stress Theory

Family stress theory was born out of the studies of Reuben Hill (1949), and

updated by McCubbin and McCubbin (2001) and Boss (2002). In his early research, Hill examined the stress associated with soldiers reunifying with their families after World War II. Hill wanted to develop a model in order to identify the variables that could explain the differences among families in their adaptation to stressful events (Crosbie-Burnett, 1989). Hill (1958) theorized that there are two complex variables that predict the extensiveness of the impact that a stressor has on the family. These variables are the family's resources and their perception of the stressor. Family resources include internal and external forms of support that contribute to the social connectedness both within and outside of the family. Positive forms of support serve to minimize the impact of a stressful event or situation. The family's perception of the event refers to how the family collectively defines and interprets the stressor.

As a whole, these ideas were formulated into what Hill (1958) called the ABC-X model of family stress. The provoking event or stressor is considered to be factor A. McCubbin and Patterson (1983) describe a stressor as a life event or transition that creates or has the potential to create change in the family. A stressor can be any event that affects the family's ability to cope with daily hassles. This event can be normative, such as a marriage or birth of a child, or it can be non-normative, such as a premature death of a family member (McGoldrick & Carter, 2003). Therefore, a stressor does not have to immediately cause change, nor does it have to be perceived as being distressful. A stressor basically begins the process of shifting the equilibrium of the family and marks the starting point for possible stress within the family system (Boss, 2002).

For the next variable in the ABC-X model, the family's resources or strengths at the time of the event are known as factor B. McCubbin (1979) defined resources as the combination of family members' strengths and assets, combined with the family's capabilities of resistance in dealing with a stressor. McCubbin and McCubbin (2001) categorized these resources into three groups: (a) personal, (b) family system, and (c) community. Personal resources are traits such as intelligence, knowledge, skills, personality, physical and emotional health, and self-esteem. Family system resources include strengths such as family communication skills, organization, cohesion, and adaptability. Relationship qualities within the family are seen as a resource within the

family system. Community resources relate to the groups and organizations that families utilize for assistance during crises, such as churches, community agencies, medical facilities, schools, and employers.

The family's perception of the event, or the meaning attached to the event by the family, is known as factor C. The definition that the family makes of the event is affected by the family's values, history, culture, religion, economics, and developmental stages (Crosbie-Burnett, 1989). Therefore, each family deals with an event through its own unique process as influenced by its experience. Given the same event, some families may assess that they can manage the stressor. Other families might believe that they cannot manage the stressor and will result in the manifestation of a crisis. Thus, the meaning a family gives to a stressor is subjective and is influenced by its experience in dealing with change and managing previous crises (Boss, 1988).

Finally, the resulting degree of stress or crisis is described as factor X. Factor X is considered the outcome variable. The result can range from a low to high degree of stress. Stress is simply the change in a family's equilibrium (Boss, 1988). Stress does not have to end in trouble and is not necessarily conveyed as being bad. It becomes problematic when the stress level in a family reaches a level at which family members become dissatisfied or show signs of disturbance. However, when the family experiences a pressure that is so severe or a change that leaves the family incapacitated, the result is crisis. Families are no longer functioning at this level. Many families seek to cope, adapt, or attempt to solve the problem in order to avoid this state of crisis. Stress is not avoided, but family functioning is preserved.

Family stress theory was significantly expanded upon by McCubbin and Patterson (1983). McCubbin and Patterson found that families either develop or fail to develop coping abilities to deal with crises. Some families find that recovery is beyond their current capabilities. They may stagnate at a lower level of functioning, or find themselves dealing with new crises before repairs can be made on the initial disturbance. McCubbin and Patterson refer to this phenomenon as crisis "pile-up," in which additional crisis situations further reduce the family's ability to cope and function. Over time, families, who experience a continued decrease in coping resources and perceive that their stressors are insurmountable, will continue to remain in a



maladaptive state. Their ability to deal with future crises will be compromised (Boss, 1988).

### Family Ecology Perspective

The family ecological perspective was developed through the work of Urie Bronfenbrenner. The mainstay of this perspective is that development occurs within the context of a family's and individual's environment. Development takes place through the processes of reciprocal interaction between humans and the persons, objects, and symbols in their immediate environment (Bronfenbrenner, 1993). These processes are further affected by the relationship between these immediate settings and by the larger contexts in which these settings are embedded. Thus, in order to understand the development of the family and the individual, one must consider their relationships with each other, with other persons, and with other systems.

More specifically, Bronfenbrenner (1979) describes these embedded settings as five major environmental systems with which the individual interacts and is affected. Each system encompasses a consecutively broader environment as it moves further away from the individual. The first of these systems is the environment closest to the individual, known as the microsystem. The microsystem is an individual's immediate environment, such as the family, school or peer group. The next level is the mesosystem. The mesosystem is a system comprised of connections between two microsystems. For example, one component of a mesosystem would be the relationship between parents and their child's school. The third level is the exosystem. The exosystem consists of external environmental settings that indirectly affect the individual. For example, the development of a child is affected on an exosystemic level by the parent's workplace. The macrosystem is the fourth level within Bronfenbrenner's model. The macrosystem is made up of the larger cultural context and societal values. The economy, political structure, and ethnic identity are all examples of how culture and society influence individual development from the macrosystem level. The final, most broad level in the model is the chronosystem. The chronosystem consists of the patterning of environmental events over the course of an individual's life. The chronosystem looks at the timing of events, as well as developmental age of an individual at which life events occur.

Bronfenbrenner (1993) theorized that both a child's individual characteristics, as well as his or her environment initiate transactions that promote or thwart development. In other words, the child's personal characteristics cause the child to be attracted to certain opportunities and to avoid others. Within the environment, a child's development is strongly affected by what is said or done to the child by parents, siblings, other relatives, peers, teachers, and other people. These regular forms of interaction between the child and the persons in his or her environment are known as proximal processes (Bronfenbrenner, 1995). Proximal processes are enduring patterns of reciprocal interactions over an extended period of time. These interactions typically occur in everyday activities, such as parent-child activities, group or solitary play, reading, and learning new skills. These enduring patterns of interaction form the primary means of development.

#### Application of Theory

The researcher integrated both family stress and family ecological theories in order to drive the research question. By combining these theories, the researcher aimed to better understand the complexity of parental stress within the context of family relationships and daily strains. Family stress theory provided the framework for developing a model of stress and resiliency in families of children with ADHD, whereas family ecological theory assisted in the selection of the specific variables to be included in the model.

Family stress theory provided a guideline on how families experience stress and what variables may contribute to the range of differing outcomes among families (McCubbin & McCubbin, 2001). The first task in determining which variables are a factor in family outcomes is to look at the stressors that affect the family. In families of children with ADHD, the stressor that parents experience is not simply a single event. In fact, parents with children who have ADHD, as well as parents of non-disabled children, both experience numerous stressors throughout the day-to-day life. Crnic and Greenberg (1990) found that parenting daily hassles were a better predictor of psychological well being due to their cumulative impact over a day, several days, or longer. These daily hassles have even more of an effect on life satisfaction than single life events. It is the family's ability to deal with these common daily stressors that contribute to pile-up

(Ehrmann, Aeschleman, & Svanum, 1995). Therefore, stressors in this study were measured by looking at parenting daily hassles.

The next step in defining which variables contribute to family outcomes is to identify the resources the family has to help deal with the stressors. The family ecological perspective helps to further define these resources beyond the scope of the individual. Bronfenbrenner (1989) explained that families fit into a larger scheme that includes individual family dynamics and community connections. Therefore, to understand family functioning, it is important to explore both relationships within the family, as well as the family's relationship with the broader environment.

Taking family relationships into account, many researchers focus on the relationship between the parent and the child. However, there are other relationships within the family that also provide interactions that contribute to the proximal processes that affect development. One such example is the sibling relationship. The context of the sibling relationship influences the ways in which families handle events. For example, a sibling relationship that is emotionally disconnected may affect the family's ability to rely on each other for emotional support in time of crisis. A positive sibling relationship could be viewed as a resource, whereas a negative sibling relationship could be viewed as another stressor. Therefore, the sibling relationship was explored as part of the processes that affect parental stress.

The other facet of family ecology theory addresses the context of the environment. To explore the family's relationship with the broader environment, this study focused on the variable of family coping strategies. Family coping explores both the context within the family, as well as the utilization of social support resources outside of the family.

In addition to calling upon resources, families also deal with stressors through their own definition and perception of the stressor (McCubbin & McCubbin, 2001). It is important to examine not only how parents describe their current level of stress, but also to look at how they view their own capacity for handling stressful events. Therefore, this study first assessed perceived parental stress. To add to the understanding of how families perceive stress, this study then looked at how families define stressors. One way that individuals define events is through their sense of coherence. According to

McCubbin and McCubbin (2001), sense of coherence refers to the degree to which individuals and families call upon their appraisal skills to manage stressful life events, strains, and changes. Sense of coherence is thought to be a key within the assessment of resiliency in individuals and families (Antonovsky, 1979). Therefore, both parental stress and sense of coherence were used as measures to determine the experience and perception of stress in families.

In order to measure differing family outcomes as the result of stress and its related experience, McCubbin and McCubbin (2001) explained that family outcomes can be viewed in terms of the well-being of family members. The perceived sense of well-being by a family member is considered a predictive factor for life satisfaction (Amato, 1994). Thus, one such measure of family outcomes is the life satisfaction or quality of life of a selected family member. This study assessed family stress from the parental point of view. Therefore, to explore family outcomes, this study explored the perceived quality of life of the parent.

Applying Hill's (1949; 1958) original ABC-X model of stress theory, the current study examined the interactive effects of the A, B, and C variables on the quality of life (X) for mothers. The role of parenting daily hassles (A factor) was used as a predictor of family coping and sibling warmth (B factors), parenting stress and sense of coherence (C factors), and quality of life (X factor). Figure 1 depicts the hypothetical model that proposes this relationship of the variables. Quality of life served as the outcome for which the total effect of all of the other variables were assessed.

#### Statement of the Problem

There have been a number of researchers that have examined parental stress in families with children who have ADHD. However, there have been few researchers that have examined the contribution of the sibling relationship as a family resource and its resulting influence on stress factors. Therefore, the current study was designed to integrate the sibling relationship as part of the stress model which examined the variables included in the model and their influence on quality of life in mothers. In sum, the purpose of this study was to investigate the influence that parenting daily hassles (A), as conceptualized by the proposed model, has on quality of life (X) in mothers of children who have ADHD, as mediated by family coping and sibling warmth (B's) and

parenting stress and sense of coherence (C's).

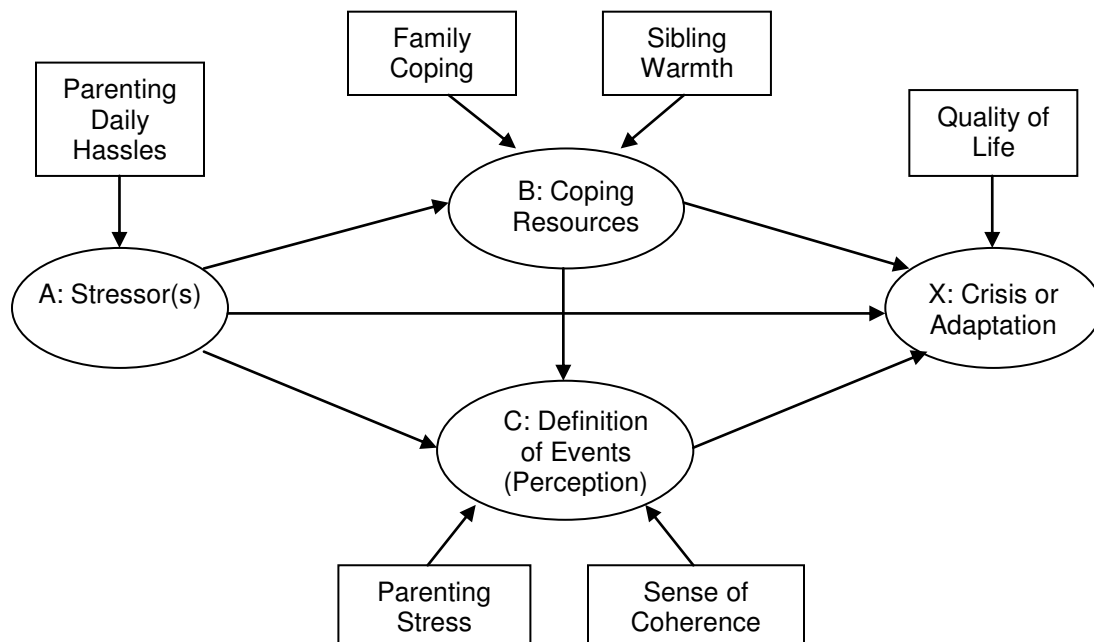


Figure 1. Path Diagram of Hypothetical Model of Factors Predicting Quality of Life

### Research Question

This study incorporated one theoretical research question that includes the following variables:

- (a) parenting daily hassles, as measured by the Parenting Daily Hassles Scale (PDH) (Crnic & Greenberg, 1990).
- (b) family coping resources, as measured by the Family Crisis Oriented Personal Evaluation Scales (F-COPES) (McCubbin, Olson, & Larsen, 1987).
- (c) perceived sibling warmth, as measured by the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ) (Kramer & Baron, 1995).
- (d) parenting stress, as measured by the Parental Stress Scale (PSS) (Berry & Jones, 1995).
- (e) sense of coherence, as measured by the Orientation to Life Scale (OLS) (Antonovsky, 1987).

(f) quality of life, as measured by Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985).

Therefore, this study was lead by the following research question:

- 1) Can parenting daily hassles (A), in conjunction with family coping and sibling warmth (B's), along with parenting stress and sense of coherence (C's) be integrated to predict quality of life (X) in mothers of children who have ADHD?  
( $A_M + B_M + C_M \rightarrow X_M$ )

### Definitions

Attention Deficit Hyperactivity Disorder (ADHD): a neurobehavioral disorder characterized by pervasive inattention and/or hyperactivity-impulsivity and resulting in significant functional impairment (Centers for Disease Control and Prevention, 2004). ADHD is also described as a developmental disorder of self-control consisting of problems with attention span, impulse control, and activity level (Barkley, 1995).

Family Coping: the process by which a family manages stress through the utilization of its resources (McCubbin & McCubbin, 2001).

Parenting Daily Hassles: the irritating, frustrating, annoying, and distressing demands that characterize everyday transactions with the environment in families with children (Crnic & Greenberg, 1990).

Parenting Stress: the level of stress resulting from day-to-day contact with children characterized by decreased satisfaction with the parenting role and a reduced quality of parent-child interaction (Berry & Jones, 1995).

Sense of Coherence: the extent to which one has a pervasive, enduring though dynamic, feeling of confidence that one's internal and external environments are predictable, manageable, and meaningful (Antonovsky, 1979).

Sibling Warmth: the companionship of the sibling relationship, characterized by affection, intimacy, nurturance, admiration, and shared activities (Furman & Buhrmester, 1985).

Quality of Life: an expression of the overall judgment of life satisfaction and the adjustment to demands associated with daily life (Diener, Emmons, Larsen, & Griffin, 1985).

### Assumptions

This study relied on the use of self-reported questionnaires. Thus, the assumption was that self-reported answers were an accurate reflection of current family relationships and behavior. Furthermore, the researcher assumed the respondents had the ability to recall information in a truthful manner, to the best of their abilities. The final assumption was that the sample was representative of parents of children with ADHD.

### Limitations

The survey was self-administered and may have increased the risk of socially desirable responses. The reporting of a diagnosis of ADHD by a doctor was based upon information supplied directly by the parent. This study was also limited by the number of respondents who correctly completed the survey. Survey research may garner lower response rates, and in turn may have affected the generalizability of this study. Finally, an analysis of the qualitative data may have introduced some bias in theme identification due to the personal connection that the researcher has with a family member who has ADHD.

### Delimitations

This study was delimited to parents that had an email account and Internet access in order to complete the online survey. Parents that have Internet access may have certain characteristics, both demographically and socially, that differ from those parents who do not have Internet access. Furthermore, these parents must have at least two children under the age of 18 living in their household. One of these children must have been diagnosed with ADHD.

### Abbreviations

ADHD: Attention Deficit Hyperactivity Disorder.

F-COPES: Family Crisis Oriented Personal Evaluation Scale (McCubbin, Olson, & Larsen, 1987).

OLS: Orientation to Life Scale (Antonovsky, 1987).

PDH: Parenting Daily Hassles Scale (Crnic & Greenberg, 1990).

PEPC-SRQ: Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Kramer & Baron, 1995).

PSS: Parental Stress Scale (Berry & Jones, 1995).

SOC: Sense of Coherence.

SWLS: Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985).



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### Introduction

This chapter provides a review of the literature relevant to families of children with ADHD and components related to the model of stress. First, an overview of ADHD and its relation to family variables is presented. Second, a review of the sibling relationship literature is explored, along with research on siblings of children with ADHD. Third, a review on parenting stress literature as well as parenting stress within families of children with ADHD is presented. Finally, the remaining components of the stress model are reviewed.

The focus of this study is to examine parental stress in families of children with ADHD. Using the ABC-X model of stress, each factor within the model is explored. For the A factor (stressor), parenting daily hassles literature is examined. The B factor (resources) is represented by family coping, with prior reference to possible mediating factors of the sibling relationship. As the C factor (definition of event), sense of coherence is presented. Lastly, the X factor (adaptation) is explored through literature on the quality of life. Within each variable, information about mothers and fathers, when available in the literature, is also included.

#### Attention Deficit Hyperactivity Disorder

##### General Overview

ADHD has been defined by the American Psychiatric Association (1994) as a “persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than typically observed in individuals at a comparable level of development” (p. 78). Thus, ADHD is comprised of two major symptoms: (1) inattention, and (2) hyperactive-impulsive behavior (disinhibition). Children with ADHD can have one of the major symptoms, categorized as predominantly inattentive type or predominantly hyperactive-impulsive type, or they can exhibit qualities from both of the major symptom categories, otherwise known as combined type.

Inattentive behavior is described as the child’s inability to sustain attention or respond to tasks or play activities as long as others of the same age (Barkley, 1996).

This behavior also carries over in the child's inability to follow through on rules and instructions as well as others. These children are characterized as being more disorganized, distracted, off-task, and forgetful than other children of the same age. Parents and teachers describe these children's behaviors as not listening as well as they should, not being able to concentrate, easily distracted, fail to finish assignments, daydream, and change activities more often than other children (Barkley, DuPaul, & McMurray, 1990).

Hyperactive-impulsive behavior is characterized by fidgetiness, difficulty staying seated when required, moving about more than other children, playing noisily, talking excessively, interrupting others' activities and conversations, and being less able than others to wait in line or take turns (American Psychiatric Association, 1994). Symptoms of disinhibition tend to decline with age, whereas those of inattention remain relatively stable throughout the elementary age (Hart et al., 1995).

Male children are between 2.5 and 5.6 times more likely to be diagnosed with ADHD than female children (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; McGee et al., 1990; Szatmari, 1992). ADHD occurs across all socioeconomic levels, and no difference in prevalence levels within different social classes are found when controlled for comorbid conduct disorders (Barkley, 1996). ADHD symptomatology is fairly universal across ethnic groups, gender, and income status, although the families' utilization of services varies across these demographic factors. Families with boys use more services than families with girls (Kendall, Leo, Perrin, & Hatton, 2005). Fewer girls and children of ethnic minorities are being identified and receiving the services they need (Bauermeister et al., 2003; Bussing, Zima, Perwien, Belin, & Widawski, 1998). However, income has been reported as not being a significant factor in any services used or services requested (Kendall et al., 2005). Birth order has also been shown to have no effect in relation to the occurrence of ADHD, as the chances of first, middle, or later born children having ADHD was reported as almost equal (Berger & Felsenthal-Berger, 2009).

As many as half of the individuals diagnosed with ADHD also have other mental disorders (Centers for Disease Control and Prevention, 2004), including oppositional defiant and conduct disorders (Barkley, 1998; Biederman, Faraone, & Lapey, 1992) and

anxiety disorders (Russo & Biedel, 1994; Tannock, 2000). The relationship between ADHD and mood disorders is less clear, with some researchers finding a high comorbidity rate (Biederman et al. 1992), whereas others have not found a strong link between the two (Weiss & Hechtman, 1993). Barkley (1996) suggests that the overlap of ADHD with mood disorders and other disorders is unidirectional. A diagnosis of ADHD does not increase the risk for mood disorders such as bipolar disorder; however a diagnosis of bipolar disorder seems to elevate the risk of a prior or concurrent diagnosis with ADHD. The same unidirectional relationship is true with Tourette syndrome.

Medication, in combination with behavioral interventions, is usually regarded as the best treatment for children with ADHD (MTA Cooperative Group, 1999). In addition to helping decrease the symptomatology of ADHD, researchers have documented decreases in negative mother-child interactions when the child is treated with medication (Barkley, Karlsson, Pollard, & Murphy, 1985; Wells et al., 2000). When ethnicity is taken into consideration, response to medication is greater than that for behavioral interventions alone, or combined treatments (medication and behavioral) for children in Hispanic and African-American populations (Bailey, 2005). Improvements with behavioral therapy may relate more to socioeconomic status than to ethnicity. However, not every parent is receptive to the use of medication, and children respond differently to the multitude of prescription medications that are available (Gage & Wilson, 2000). These findings stress the importance that multimodal treatment regimens need to be specifically tailored to the needs of the children and their parents (Hechtman, Abikoff, & Jensen, 2005). Finally, information on the long-term effects of treatments and medication is lacking (Centers for Disease Control and Prevention, 2004). Studying children with ADHD needs to take into account all of these factors, including subtype, comorbidity, and treatment modalities.

### ADHD and Families

In recent years, literature on family constructs in families with children with ADHD has increased. Children with ADHD often make family relationships more challenging because of both biological and self-regulatory problems (Alizadeh, Applequist, & Coolidge, 2007). ADHD symptoms often leave parents feeling emotionally and

physically overwhelmed (Kendall et al., 2005). In particular, parents of children who have ADHD feel most challenged in the areas of dealing with homework, family routines, and when their children play with others (Coghill et al., 2008). Thus, examining family interaction patterns may help to determine what contributes to or results from the disruptive behavior of children with ADHD. A review of the studies on families with children with ADHD revealed four themes: parenting styles, parental well-being, family environment, and marital relationships.

Parenting styles. Lange et al. (2005) reported higher levels of authoritarian parenting styles in families of children with ADHD as compared to both families of children without disabilities as well as families of children with emotional disorders. This finding was consistent with the notion that children with ADHD require more of a controlling approach to child management (Barkley, Karlsson, & Pollard, 1985). Parents of children with ADHD have been observed as using significantly more corporal punishment strategies (Alizadeh et al., 2007), negative-reactive strategies (Johnston, 1996), and coercive interaction patterns than control parents (Lindahl, 1998). Moreover, Gau (2007) observed mothers of children with ADHD as being less affectionate and more overprotective and controlling toward their children than were mothers of children without disabilities. This difference was particularly evident in boys more than in girls. However, when oppositional behaviors are excluded from observation, mothers of children with ADHD were not seen as displaying more negative parent attributions than mothers of nondisabled children (Johnston, Chen, & Ohan, 2006). Controlling and negative-reactive parenting seem to be more linked to the presence of oppositional behavior than to ADHD alone.

In explaining the use of more controlling parenting strategies, Campbell (1973, 1975) suggested that mothers may be simply responding to their child's behavior. As reported, mothers tended to be more disapproving during task performances that the child was asked to do. However, this tendency was slight, and these mothers were seen as supportive and not punitive. During difficult task assignments, mothers demonstrated more encouraging comments and provided more suggestions concerning impulse control. Whalen (1989) also noted mothers of hyperactive boys were more helpful and encouraging in structured tasks, than mothers of nondisabled boys.

Fathers of children with ADHD have also been observed to be more directive with their children than fathers of nondisabled children (Tallmadge & Barkley, 1983). However, the children were more likely to comply with the father's commands than with the mother's requests. Mothers also observed this tendency in their children, and reported that their sons with ADHD are better behaved in the presence of the father (Barkley, 1998). When fathers, mothers, and their children with ADHD were interacting as a triadic group, fathers tended to increase their demands of their hyperactive sons whereas mother's demands tended to decrease (Buhrmester, Camparo, Christensen, Gonzalez, & Hinshaw, 1992). This phenomenon was not noted in triadic interactions within mothers and fathers of nondisabled children.

Overall, the parenting style of both mothers and fathers of children with ADHD may be viewed as a consequence rather than the cause of the child's behavior (Hechtman, 1996). The behaviors of children with ADHD are what drive the control-oriented parent-child interactions (Mash & Johnston, 1990). When parents respond negatively to their children's interactions, their children may further increase their negative behavior as a response. Thus, a cycle of behavior and responses ensues, in which the parent and child reciprocally elicit negative behaviors from each other (Barkley, 1998). This continual cycle of reactivity maintains the child's disruptive behavior, adds to parent stress levels, and impacts future interactions between the parent and the child (Johnston & Ohan, 2005).

Parental well-being. Parents of children with ADHD derive lower satisfaction from parenting and have described themselves as being less skilled parents (Kadesjo, Stenlund, Wels, Gillberg, & Hagglof, 2002; Mash & Johnston, 1983a). Mothers expressed less confidence in their parenting knowledge, lower parenting self-esteem, and reported more self-blame than mothers of control children (Johnston, 1996). In a later study, Podolski and Nigg (2001) also found more role dissatisfaction in parents of children with ADHD as compared to parents of control children. Inattentive and oppositional behaviors contributed uniquely to role dissatisfaction, regardless of the level of hyperactivity of the child. Parental coping through positive reframing was associated with higher role satisfaction for both mothers and fathers.

Parents of children with ADHD report higher levels of depression than families of

typically developing children (Befera & Barkley, 1985; Cunningham, Benness, & Siegel, 1988). In these families, mothers have been found to have higher depression levels than their husbands. Mothers' depression ratings were linked to family dysfunction and child behavior, whereas fathers' depression levels were linked only to family dysfunction. The relationship between family dysfunction and depression is consistent with the research on families of nondisabled children (Mitchell, Cronkite, & Moos, 1983). However, as family functioning contributes to depression, it does not suggest that family dysfunction is necessarily higher in families of children with ADHD. In areas such as problem solving, communication roles, behavioral control, responsiveness, and involvement, family functioning is not significantly different between families of children with ADHD and those with nondisabled children (Cunningham et al., 1988; Lewis, 1992; Lindahl, 1998). There are other family variables that may provide better insight into differences in the family environment with a child who has ADHD.

Family environment. Numerous researchers have indicated links between impairment in children with ADHD and certain variables in the family environment. Pressman et al. (2006) found that parents of children with ADHD reported higher levels of conflict within the family, and revealed significantly more problems with cohesiveness, expressiveness, achievement orientation, and organization in comparison to normative samples. This finding is consistent with Niederhofer et al. (2003), who reported significantly more conflicts in families of children with ADHD, and a significant lack of organization and cohesion, as compared with control families. Schroeder and Kelley (2009) also found higher levels of conflict in families of children with ADHD. In addition, they reported evidence of less organization in the family environment among families of children with ADHD as compared to families of children without disabilities.

Mothers of children with ADHD report greater social isolation than mothers of non-disabled children, and higher levels of social isolation are found when the severity of ADHD symptomatology is greater (Barkley, 1998; Breen & Barkley, 1988; Mash & Johnston, 1983a). These families also indicated fewer extended family contacts than families of nondisabled children, and of the extended family they relied upon, these families described them as less helpful (Cunningham et al., 1988).

Marital relationships and divorce. Whereas some researchers have found parents of children with ADHD to have more marital disturbances (Befera & Barkley, 1985; Cunningham et al., 1988; Fischer, 1990), other researchers have not found any differences in marital conflict between parents of children with ADHD and those with non-disabled children (Barkley, DuPaul, & McMurray, 1990; Camparo, Christensen, Buhmester, & Hinshaw, 1994; Lindahl, 1998; Mash & Johnston, 1983a). In a longitudinal study, Barkley, Fischer, Edelbrock, and Smallish (1990) found higher rates of separation and divorce in families with a child with ADHD. In the area of marital satisfaction, parents of children with ADHD reported lower levels, as compared to their non-disabled counterparts, regardless of the severity of ADHD symptomatology (Befera & Barkley, 1985; Murphy & Barkley, 1996).

While reports of marital conflict and stability are conflicting, the more important factor may be what might help moderate negative influences on the marriage. In a study examining child rearing and discipline similarity between parents, Harvey (2000) found that parenting similarity was associated with fewer disruptive behavior problems, greater marital adjustment, and less marital conflict among parents of children with ADHD. Parenting similarity was also associated with lower parenting stress for mothers.

Finally, Heckel et al. (2009) completed a study on the relationship between divorce, ADHD symptomatology, and social factors. Parental divorce was associated with greater ADHD symptom severity. Children of divorced parents presented with significantly more inattention, hyperactivity, and impulsivity. In addition, these children displayed more externalizing and internalizing behavior and poorer social functioning. Children who had the inattentive type of ADHD were significantly more impaired in all domains of functioning in divorced families relative to those from intact families. However, children of divorced families who had the combined type of ADHD presented only with more ADHD symptomatology and did not differ significantly in other areas of functioning as compared to children from non-divorced families. Overall, it is suggested that there is greater maladjustment in dealing with divorce for children with the inattentive type of ADHD.

#### Sibling Relationships

The sibling relationship can be considered life's most influential and longest

lasting bond between individuals (Bank & Kahn, 1997). There is a considerable degree of variability in sibling relationships, shaped by the child's personality, gender, age spacing, and birth order (Dunn, 2002). Sibling relationships are also influenced by other relationships and constructs within the family, including parenting behaviors (Brody, Stoneman, & McCoy, 1994a; Howe, Fiorentino, & Garipey, 2003) and marital conflict (Jenkins, 1992). Although these constructs can have varying degrees of impact on different sibling dyads, researchers have come to a consensus about certain aspects of the sibling relationship.

### Conflict and the Sibling Relationship

While all siblings enter into conflict with each other at some point, there are many individual differences between levels of conflict of siblings. One variable that accounts for some of the variance in conflict levels is temperament. Children with highly active temperaments experience four times as much sibling conflict than less active children (Brody, Stoneman, & Burke, 1987a, 1987b; Mash & Johnston, 1983b). For girls, high activity, high emotional intensity, and low persistence were associated with greater sibling conflict. The simple lack of congruence between two sibling temperaments can also lead to a higher level of conflict than in siblings with more similar temperaments (Munn & Dunn, 1989). The lack of fit between siblings of different temperaments may put them at risk for conflict. However, siblings who both have a highly active disposition still experienced a high level of conflict despite their match in temperament (Stoneman & Brody, 1993).

Sibling conflict tended to occur more frequently in homes where there is a high level of conflict (Brody et al., 1994a; Brody, Stoneman, McCoy, & Forehand, 1992). More specifically, when there is a high level of marital discord, researchers have observed higher levels of aggression between siblings (Jenkins, 1992; Sheehan, Darlington, Noller, & Feeney, 2004). Marital unhappiness, conflict, and less family cohesion were associated with less positivity and more negativity in sibling relationships (Brody et al., 1987b). However, marital conflict and parental negative affectivity can be mediated by the quality of the parent-child relationship. When parenting does not become hostile, marital distress and parental depression had no significant effect on sibling relationship quality (Brody et al., 1994a, 1994b; Hetherington, 1988; MacKinnon,



1989).

Some siblings may compensate for increased marital conflict in their families or a lack of parental care, by intensifying the bond between each other (Bank & Kahn, 1997). Older children may increase caregiving and prosocial behavior toward their younger siblings (Hetherington, 1989; MacKinnon, 1989). This increased role may serve to buffer the younger children from the marital conflict. However, while this bond can be helpful and protective in providing care in the absence of parental support, it can also be harmful to the children's relationship. One of the siblings may take on a dual relationship as both the sibling and the caregiver, and assume the added stress and strain of parental roles. Furthermore, if conflict already exists in the sibling relationship, it was less likely that younger siblings will receive prosocial and responsive care from their siblings in this role (McHale & Crouter, 1996).

Sibling conflict was also influenced by maternal preferential treatment of one sibling. When actual preferential treatment occurs, as opposed to perceived, preferential treatment occurs, sibling rivalry, aggression, and sibling avoidance were more intense (Boer, Goedhart, & Treffers, 1992). Brody, Stoneman, and Gauger (1996) found more negativity and conflict in the sibling relationship when either actual or perceived differential treatment of one child over another occurred. In looking at the ordinal position of children, younger siblings exhibited greater vulnerability to differential treatment (McHale, Crouter, McGuire, & Updegraff, 1995).

Although sibling conflict is the area that seems to trouble parents, sibling conflict is not necessarily harmful to the sibling relationship or social development of the children. Childhood sibling relationships are often characterized by relatively high levels of physical aggression and conflict (Aguilar, O'Brien, August, Aoun, & Hektner, 2001; Berndt & Bulliet, 1985; Furman & Buhrmester, 1992), often exceeding the levels of aggression within the peer context (DeHart, 1999). Moderate amounts of sibling conflict can play a beneficial role in developing prosocial and conflict negotiation skills. Children whose sibling relationships were characterized by moderate amounts of conflict and warmth have been rated by their teachers as being more socially competent and having more emotional control than siblings in relationships with high levels of conflict and low levels of warmth (Stormshak, Bellanti, & Bierman, 1996). The sibling relationship may

serve as a platform for learning and practicing skills of social competency that will serve them in peer relations, as well as interactions throughout their lives.

### Age and Gender Influences

By middle childhood, siblings spent more time together than they spent with their own parents (McHale & Crouter, 1996). This time provides ample opportunity for both positive and negative interactions. Buhrmester and Furman (1990) reported on a number of age-related findings among siblings. First, sibling relationships become more egalitarian and less asymmetrical with age. Thus, less dominating behaviors are observed as children move toward adolescence. Second, sibling relationships also become less intense with age, with less reported companionship, intimacy, and affection occurring between siblings in adolescence than in middle childhood. Finally, older children perceived more conflict with their younger siblings, whereas younger siblings rated their relationship with their older siblings as being less conflictual than what older siblings report. Relationships with younger siblings were viewed as less harmonious and warm than those with older siblings.

In regard to gender differences, girls tended to feel more positive toward their same-sex siblings as compared with sisters' relationships with their brothers, as well as brothers' relationships with their same-sex siblings (Furman & Buhrmester, 1985). Females tended to rate their sisters significantly higher in the areas of intimacy, companionship, similarity, and admiration (Buhrmester & Furman, 1990). However, the rate of interaction between sister pairs is higher than the rate of interaction between brother pairs, and thus the higher rate of prosocial behavior may have resulted from this increased rate of interaction (Brody, Stoneman, MacKinnon, & MacKinnon, 1985). Although boys rated their relationship with their brothers higher than their sisters on these variables, the brother relationship was still lower in these variables than the sister relationship. In general, same-sex sibling dyads were typically more prosocial and less aggressive than mixed-sex dyads (Dunn & Kendrick, 1981; Pepler, Abramovitch, & Corter, 1981).

### Family Constellation

Birth order effects have shown to have only a modest influence on children's emotional and social development (Brody et al., 1985; Buhrmester, 1992; Dunn, 1988,

Teti, Gibbs, & Bond, 1989). Within the minor role that birth order plays, there is further variation depending upon gender, age spacing, and age. There is a lack of a consistent relationship between age spacing of siblings and the amount of conflict or frequency of prosocial behavior. Some researchers found more conflict in wider spaced siblings (Minnett, Vandell, & Santrock, 1983; Stocker, Dunn, & Plomin, 1989), whereas others reported greater conflict between siblings closer in age (Buhrmester & Furman, 1990; Furman & Buhrmester, 1985). The different findings among these researchers may be accounted for by differences in the family structure, or differences in siblings at varying points of development.

Older siblings may serve as models for younger siblings, in which the younger child learns from observation and imitation (Bandura, 1973; Lamb, 1976; Parke, MacDonald, Beitel, & Bhavnagri, 1988). The younger sibling may try to duplicate both positive, as well as negative behaviors of the older sibling. Here, the sibling relationship provides the opportunity for training in the use of social behaviors, including aggression. The relational and physical aggression of older children has been shown to predict younger sibling's aggression toward peers (Ostrov, Crick, & Stauffacher, 2006). Older children tended to be more prosocial and nurturing than their younger siblings (Abramovitch, Corter, Pepler, & Stanhope, 1986; Pelletier-Stiefel et al., 1986), but also tended to display more aggressive behavior (Abramovitch et al., 1986; Ostrov et al., 2006). However, older children may be more prosocial and agonistic because they simply have a larger repertoire of social behaviors than their younger siblings.

Overall, family constellation variables account for little variability in the affective quality of sibling relations (Schicke, 1995). Variance in sibling relationships may be better accounted for through individual differences in temperament, as well as other family variables. Within-family comparisons may provide for a more sensitive test of birth order differences (McHale, Crouter, & Whiteman, 2003).

#### ADHD and Siblings

Researchers studying ADHD have mainly concentrated on the diagnosed child and his or her performance on various measures. In the body of research about families with children with ADHD, the main focus is on maternal attributes and outcomes. However, Coghill et al. (2008) suggested that the sibling relationship is one of the three

relationships that were most affected by ADHD, behind the parent relationship, and ahead of relationships with other children. Literature regarding the effects upon siblings of children with ADHD is limited to a few studies. The absence of these studies is concerning, considering ADHD is one of the most commonly diagnosed child psychiatric disorders in the United States (Barkley, 1997), and thus reaches many families.

Mash and Johnston (1983b) conducted one of the first studies on sibling interactions of hyperactive and non-hyperactive boys. Child participants, who were recruited through physicians, psychologists, and schools, were observed in a playroom set up by the researchers. In this examination, hyperactive boys (mean age of 6.7 years) and their siblings (mean age of 7.1 years) showed significantly higher levels of observed conflict relative to non-disabled sibling dyads. Negative behavior between hyperactive children and their siblings, such as verbal aggression or noncompliance, was unrelated to either the sex or ordinal position (older versus younger) of the sibling. However, in pairs with hyperactive children who are younger than their siblings, more negative behavior was reported as compared to the sibling pairs where the hyperactive child was the older child. Mash and Johnston also found that sibling interactions had an impact on family variables. Mothers' reports of parenting stress were related to difficulties in the interactions between children with ADHD and their siblings.

In a qualitative study on sibling accounts of ADHD, Kendall (1999) sought to describe the experience of living in a family with a child with ADHD from a sibling perspective. Families were recruited through advertisements at parent support groups, schools, community health agencies, and pediatric offices. Data were collected through individual and family interviews, and through written diaries. The children in the study had a mean age of 11 years. All of the children who had ADHD in the sample were male.

Kendall (1999) found that children felt victimized by their siblings with ADHD and their perceived experience of victimization was often minimized or overlooked by family members. Siblings described their family life as "chaotic, conflictual, and exhausting" (Kendall, 1999, p. 127). As a result of social and emotional immaturity associated with ADHD, siblings reported increased parental expectations of sibling caretaking of the child with ADHD. These siblings said they were expected to befriend, supervise, and

protect their brothers or sisters with ADHD. Disruption caused by the symptoms of ADHD was named as the most significant problem for siblings. In general, siblings were resentful that family life was controlled by the child with ADHD. Many siblings reported feeling anxious, worried, and/or sad as a result of their view that their lives were different and had more demands compared with families without children with ADHD. However, higher levels of anxiety and depression among siblings of children with ADHD when compared to children with nondisabled siblings have not been found (Jones et al., 2006).

An analysis of the positive effects that siblings might have on children with ADHD was examined by Fussell, Macias, and Saylor (2005). Participants were recruited through the pediatric clinic affiliated with the researchers' institution. The age of the children ranged from 6 to 15.6 years (mean age of 9.9 years). Parents completed questionnaires in social skills rating and a child behavior checklist. The researchers hypothesized that children with ADHD would benefit from having a sibling model prosocial behavior. In their study, sibling social skills were significantly better when compared to their brothers and sisters with ADHD. However, there were no significant differences in social skills or behavioral problems between children with ADHD who had siblings and those who were the only child in the family.

Overall, Barkley (1998) has proposed that the sibling relationship in families with children who have ADHD is likely to be tense and strained. Baldwin, Brown, and Milan (1995) completed a study on stress in caregivers of children with ADHD. In this study, they interviewed primary caregivers of male and female children that ranged in age from 5 to 14 years. Parents also completed a child behavior checklist and questionnaire on resources and stress. Parents were recruited from an outpatient child psychiatric clinic. The researchers found through their interviews that siblings tended to tire of trying to understand and live with the disruptive behavior associated with ADHD. In addition, siblings may become increasingly jealous of the high amount of attention the children with ADHD receive from their parents. This jealousy and resentment were even more heightened in siblings who were younger than the child with ADHD. As a result, siblings of aggressive children with ADHD were more likely to display aggressive behavior themselves.

In further support of heightened aggression, Jones et al. (2006) studied male and female siblings between the ages of 9 and 13. Participants were recruited from local physicians and psychologists. Parents completed a children's depression inventory and scales in pediatric anger and anxiety. The researchers found higher levels of trait anger among children who had a sibling with ADHD as compared to children with no disabled siblings. Kendall (1999) also observed retaliatory aggression as a common phenomenon among siblings of children with ADHD. In light of this heightened aggression, the opportunity for sibling conflict was further increased, and thus may have an effect on family functioning.

In another study on sibling conflict, Smith et al. (2002) explored sibling relationships among 30 boys with ADHD. Participants were recruited from several ADHD clinics. The age of the children ranged from 7 to 13 years old. Siblings were younger than the children with ADHD, and closest in birth order. Participants were given questionnaires to complete, including parent forms and sibling forms. They found that the severity of ADHD symptoms was positively associated with conflict in the mother-child relationship as well as the sibling relationship. Mothers had more conflict with their child who had ADHD than with the sibling that did not have ADHD. Conflict in the mother-sibling relationship was positively associated with conflict in the relationship between the child with ADHD and his sibling. There was an inverse association between siblings' peer competence and conflict in the relationship between the mother and the child with ADHD. Overall, mother-reported externalizing symptoms predicted child reports of sibling conflict.

Mikami and Pfiffner (2008) continued the exploration of sibling relationships in their research. They studied 71 children with ADHD as compared to a small control sample of 14 children. The children with ADHD ranged in age from 4 to 18 years, and the siblings ranged in age from 5 to 11 years. Participants were recruited from a university-based research clinic for ADHD for the clinical sample, and from schools for the control sample. Parents and teachers completed behavior rating scales through the mail. Parents, children, and their siblings then attended three clinic visits for interviews, psychometric testing, and self-report questionnaires. Their results supported the findings of previous studies, in that the sibling relationships of children with ADHD had

more conflict relative to the sibling relationships of children without ADHD. Comorbid internalizing problems significantly predicted lower warmth/closeness in the sibling relationship. However, internalizing problems were not significantly related to conflict. Comorbid externalizing problems significantly predicted increased conflict and decreased warmth/closeness in the sibling relationship.

### Parenting Stress

Within the area of family stress, there are stressors that are uniquely associated with parenting. The parental role encompasses everyday events that occur within the family (Menaghan, 1983). These events have an effect on and are influenced by the relationships both within the family as well as outside the family system. At every interaction, there can exist opportunities for things to go not as expected or for demands to be increased. At this point, the parent's subjective assessment is what determines his or her experience as stressful.

Parenting stress can be defined as a "set of processes that lead to aversive psychological and physiological reactions arising from attempts to adapt to the demands of parenthood" (Deater-Deckard, 2004, p. 6). Parents' reactions are individualized, and can include subjective feelings of emotional pain and anxiety, as well as irritation, frustration, inadequacy, and annoyance in response to the demands of interaction with their children (Ventura, 1987). Parenting stress thus incorporates both emotional and behavioral responses (Crnic & Low, 2002), resulting from the cognitive assessment of their situation through their thoughts, beliefs, and attributions. These attributions include the parent's expectations of what is normal, perceived lack of control and violations of those expectations, and self doubt (Deater-Deckard, 2004).

Parenting stress is thought of as both an antecedent and consequence of life events (Kazdin, 2004). For example, child disability affects the stress that parents experience, but parenting stress also influences the manifestation and maintenance of the behaviors associated with the disability. Here, parenting stress has a reciprocal relationship with such life events.

Stressors associated with parenting differ, depending on the life cycle stage of the family (Carter & McGoldrick, 1988). Thus, the arrival of a new baby carries its own unique stressors, whereas parenting teenagers brings another set of challenges.

Increases in parenting stress were evident when children were younger, and decreases occurred as children aged and parents became more competent in their role (McGoldrick, Heiman, & Carter, 1993). Parenting stress may increase if parents are unable to change their expectations as children develop (Pitzer, 1998). Thus, the demands that parents make of their children need to be age appropriate and reflective of the developmental stage of the child.

Aside from life cycle stages, stressors can be also classified under two domains. Certain stressors are considered normative, or the stressors that commonly and predictably accompany the particular challenges in a family life cycle (Walsh, 1993). Thus, it is expected that a family will experience disruption and distress over the birth of the first child. Other stressors are labeled as nonnormative, and are defined as the stressors that are uncommon and unexpected. These stressors include such events as the untimely death of a child (Walsh & McGoldrick, 1991) or the devastation of a natural disaster (Proctor et al., 2007). Although nonnormative events tend to be more traumatic for families (Neugarten, 1968), normative events also have the potential to leave a parent in a state of crisis if the parent does not adapt and cope with the changes brought about by such events (Carter & McGoldrick, 1988).

Some gender differences have been found between mothers' and fathers' experiences with parental stress. Men's parenting stress tended to be tied most strongly to their satisfaction in their partnerships, whereas women's parenting stress was linked most strongly to the attributes of their children (Deater-Deckard & Scarr, 1996; Gable, Belsky, & Crnic, 1992). Men were more likely to withdraw from family relationships or become more negative when faced with parenting stress. Consistent with theories of gender differences in stress, women were more apt to respond to stress by turning toward rather than away from their social networks, including family and child relationships (Taylor et al., 2000).

Parenting stress may be predicted by and may in turn affect a variety of factors. The age of the mother at the time of the first child's birth has been correlated with parenting stress, with early (teenage) motherhood predicting greater parenting stress (Levine, Pollack, & Comfort, 2001). Parenting stress has been associated with low parenting satisfaction (Koeske & Koeske, 1990), abusive behavior (Kelly, 1998;



Rodriguez & Green, 1997), and insecure child attachment (Hadadian & Merbler, 1996; Jarvis & Creasey, 1991). Mothers exhibiting higher levels of parenting stress reported more externalizing behaviors, such as aggression and conduct problems, in their children (Deater-Deckard, Pinkerton, & Scarr, 1996; Qi & Kaiser, 2003).

Many of the researchers studying parenting stress have focused on parents of children from clinical populations, such as children with developmental disabilities (Oelofsen & Richardson, 2006; Smith, Oliver, & Innocenti, 2001) and genetic problems (Macias, Saylor, Rowe, & Bell, 2003; Johnston et al., 2003). Less is known about parenting stress within families of nondisabled children and parents. Due to the increased demands of having a disability, families of disabled children overall experienced a higher level of parental stress, increased caregiving difficulties, and had added challenges for adaptation and coping (Beresford, 1994; Dyson, 1997; Tunali & Power, 1993). Within these families, family functioning variables, such as social support, financial resources, and time resources, were more predictive of levels of parenting stress than the severity of the child's disability (Rodriguez & Murphy, 1997; Smith et al., 2001).

### ADHD and Parenting Stress

Due to the extra demands that accompany the management of children with behavioral disorders, parents may find themselves in more frequent stressful situations. Parenting a child with ADHD can challenge resources and family coping ability (Baker & McCal, 1995), and thus lead to higher levels of parenting stress when compared with families of children who do not have ADHD (Gupta, 2007). Families who are already stretched thin on resources and coping strategies may reach a point of crisis, whereas other families may act quickly to mobilize resources and make a plan of action. To better understand the demands as well as the resiliency of families with a child with ADHD, researchers have explored the manifestation and maintenance of parenting stress.

Children who exhibited highly disruptive behaviors associated with ADHD were likely to have parents with high levels of parenting stress (Anastopoulos, Guevremont, Shelton, & DuPaul, 1992; Fischer, 1990; Harrison & Sofronoff, 2002; Mash & Johnston, 1983a). Similar elevations in parenting stress among families of children with ADHD

have been found across child ages (Mash & Johnston, 1983a; Barkley et al., 1990) and for both boys and girls (Breen & Barkley, 1988). In addition, reports of parenting stress have been similar among mothers and fathers (Baker, 1994). Furthermore, parents who have less knowledge and coping skills about ADHD were predisposed to higher levels of parenting stress than parents of non-disabled children (Mash & Johnston, 1983a).

While researchers commonly compare families with children with ADHD to families with non-disabled children, a smaller subset of researchers has examined such families in contrast to families with children who have other types of disabilities. Baker and McCal (1995) studied families of children who had ADHD, learning disabilities, and no disabilities. Mothers of children with ADHD reported the highest level of parenting stress as compared with mothers of learning disabled children, as well as non-referred children. Specifically, mothers of children with ADHD experienced significantly higher parenting stress due to child characteristics. These mothers reported significantly more parenting stress due to their child's distractibility and hyperactivity. The children with learning disabilities, as well as the non-disabled children, did not present with significant externalizing behavior problems. Baker and McCal concluded that externalizing behavior problems, particularly those related to hyperactivity and aggression, were a major contributor to parenting stress. Parenting stress in relation to parent characteristics and family context variables was not significantly different among the groups.

In another study of differing disabilities, Lange et al. (2005) examined families of children with ADHD, mood and anxiety (emotional) disorders, and no disabilities. Parents in the ADHD and emotional disorder (ED) group reported more stress, less social support from family and friends, and a lower quality of life than parents of non-disabled children. In looking at family functioning, parents the ADHD and ED group showed a similar profile of deficits, both being higher than the control group, but not significantly differing from each other. Both the parents in the ADHD and the ED group reported less parental satisfaction than the control group. Overall, many similarities were found between the families in the ADHD group and the ED group, of which Lange et al. suggest may be reflective of a common maintenance strategy of families in dealing with a range of childhood psychological problems.

As these studies demonstrated heightened parenting stress in families with a child with ADHD, the next step is to examine what factors contribute to parenting stress. The stress experienced by parents resulted not only from dealing with the symptoms of ADHD, but also from the other demands that occurred due to problem behaviors (Johnson & Reader, 2002). For example, disruptive behavior may prompt telephone calls from a teacher or lead to a parent missing work. Due to past experiences, a parent may be hesitant to go back to the situation in which the behavior occurred previously. However, some contexts are almost impossible for some parents to avoid completely, such as a grocery store, and parents may worry the behavior may manifest itself again. In addition, mothers of children with ADHD perceived less support from their families than did mothers of children without disabilities (Gau, 2007), which in turn only heightened the level of stress that they were experiencing.

Several researchers have found the strongest indicator of parenting stress in mothers was the child's challenging behaviors (e.g., Anastopoulos et al., 1992; Harrison & Sofronoff, 2002; Mash & Johnston, 1990; Vitanza & Guarnaccia, 1999). Specifically, the most important factor to a mother's level of parenting stress was how challenging and oppositional she viewed her child to be. This factor was most influential regardless of the level of the child's ADHD symptoms (Podolski & Nigg, 2001; Vitanza & Guarnaccia, 1999). In addition to level of ADHD symptomatology, other factors, such as the child's temperament and parenting tasks specific to the child with ADHD, were also not strong indicators of parenting stress. Overall, child behavioral disturbance and perceived parental control over child behaviors were the strongest predictors of parental stress (Harrison & Sofronoff, 2002).

In addition to the child's behavior, family income and other financial stressors have contributed to overall variance in stress in parents of children with ADHD (Baldwin et al., 1995). Knowledge of financial difficulties is particularly salient in interventions with families from lower socioeconomic backgrounds. Parents from lower socioeconomic backgrounds may be more at risk for higher stress levels because they are already trying to manage the family under financial strain, in addition to the added stressors of the child's disruptive behavior. They also possess fewer resources to gain knowledge about ADHD, acquire coping skills, and obtain help.

Researchers have also examined what effects parenting stress has on the health and well-being of the parent. Vitanza and Guarnaccia (1999) found that parenting stress, self-esteem, and interpersonal sensitivity were all contributing factors to psychological distress in mothers of children with ADHD.

### Parenting Daily Hassles

The research on stress is mainly categorized by major life changes and events (Crnic & Booth, 1991). These events can include such things as divorce or job loss. Although these events negatively impact the individual and family system, most families experience such changes on a low-frequency basis, and some families may not experience the extreme of such major events (Crnic & Greenberg, 1987). In addition, these life events carry a long-term impact, but may not be experienced in the same way from one day to the next (Fisher, Fagot, & Leve, 1998). Instead of approaching stress as a result of a major life transition, Kanner, Coyne, Schaefer and Lazarus (1981) suggested that the cumulative effect of relatively minor daily stresses may have a more significant impact on family adaptation and functioning. These daily stresses may have little significance on their own, but collectively taken over a day, week, or a month, these ongoing events may add up into a meaningful stressor for an individual (Crnic & Greenberg, 1990).

One type of these ongoing, continuous stressors is daily hassles. Serido, Almeida, and Wethington (2004) defined daily hassles as “relatively minor events that arise out of day-to-day living” (p. 18). Daily hassles can also include the minor unexpected events that disrupt daily life, such as an argument or a car breakdown. Researchers have studied daily hassles across many domains, including the marital relationship (Stoneman & Gavidia-Payne, 2006), spousal caregivers (Vedhara, Shanks, Anderson, & Lightman, 2000), grandparents as primary child caregivers (Gerard, Landry-Meyer, & Guzell, 2006), and the adolescent peer group (Bowker, Bukowski, Hymel, & Sippola, 2000). Daily hassles included things such as spousal conflict, childcare, and peer conflict. As compared to major life events, daily hassles have been found to be more powerful predictors of wellness outcomes (Lazarus, 1984), physical health (Grzywacz, Almeida, Neupert, & Etnner, 2004), and psychological health (Bolger, DeLongis, Kessler, & Schilling, 1989; Eckenrode, 1984).

The daily hassles associated with parenting and childcare are another subset of these continuous stressors. Crnic and Greenberg (1990) defined parenting daily hassles as the “irritating, frustrating, annoying, and distressing demands that...characterize everyday transactions with the environment” (p.1629). Specifically, these demands are minor events that normally occur in families with young children. More recently, Crnic, Gaze, and Hoffman (2005) have conceptualized parenting daily hassles as “potential everyday frustrations and irritations that accompany childrearing and children’s typical, but often challenging behavior” (p. 118). The hassle may be infrequent or situational dependent, or it may be repetitive and predictable. In determining its effect, a single hassle may not be considered a stressor, but a collection of these demands may adversely affect the parent-child relationship (Crnic & Booth, 1991).

As with studies of daily hassles in other domains, Crnic and Greenberg (1990) found that parenting daily hassles were more powerful indicators of family well-being than mothers’ major life stresses. Parenting daily hassles were predictive of parental role satisfaction, parental psychological well-being, and family functioning. In later studies, researchers further supported the connection of daily parenting hassles as determinants of mothers’ psychological distress, parenting stress, and satisfaction (Creasey & Reese, 1996; Mazur, 2006).

Crnic and Booth (1991) expanded their exploration on daily hassles to include fathers, and found similar results between mothers and fathers perception of daily hassles in relation to social support and parental satisfaction. They found no significant difference between mothers and fathers in the amount of daily hassles perceived. Creasey and Reese (1996) reported similar findings, and found mothers and fathers were not significantly different in terms of perceptions of parenting hassles. Consistent relationships were demonstrated between parenting hassles, adult adjustment, and child behavior problems among both parents.

Parenting daily hassles have also shown predictive qualities of other family constructs. In a study on marital adjustment, elevated levels of parenting daily hassles were predictive of lower perceived marital quality (Harper, Schaalje, & Sandberg, 2000). Coplan, Bowker, and Cooper (2003) found that parenting daily hassles predicted child externalizing problems beyond the contribution of child temperament characteristics. In

an exploration of fathers' in a Head Start program, Fagan (2000) indicated a significant negative relationship between daily hassles and amount of accessibility and play interaction with children. Fathers who experienced hassles throughout the day were less inclined to have positive affect in dealing with their children. Foster, Reese-Weber, and Kahn (2007) reported similar results in studying fathers. In their study, fathers who indicated higher frequencies of parenting daily hassles demonstrated more passive coping styles and had higher levels of negative emotional expressions within the home. Finally, Lee, Vernon-Feagans, Vazquez, and Kolak (2003) determined that parenting daily hassles were a significant contributing variable to the prediction of role strain for working mothers in dual-earning families.

In concluding their study, Crnic and Greenberg (1990) found parenting daily hassles to be an important source of stress. These minor hassles not only contributed additively to major life stress predictions, but also as an independent construct for assessing stress in parent-child relations. Thus, to understand parent and family stress, an exploration of daily hassles is particularly relevant (Crnic & Booth, 1991).

#### Family Coping

Prior to the 1970's, the body of research on stress was crisis-oriented and focused on family failures (Boss, 1988). However, views about families and their adaptation to stress started to change. Starting in the 1970's, researchers became concerned with families' capacity to successfully manage stress. Out of this research movement arose the concept of coping, both as an individual construct and a family construct.

Although not originally proposed by Hill (1949), family coping can be thought of as part of the resources, or 'B' factors in his ABC-X model of family stress. Family coping, however, is not simply an independent resource, but rather is what the family *does* with its resources (Boss, 1987). A family may possess adequate resources to effectively deal with a stressful situation, yet the family may not use these resources. Coping is not only about obtaining resources, but also initiating efforts to resolve the hardships that created the stressor (McCubbin & McCubbin, 2001). It is how the family utilizes those resources, rather than the access to the resources, that determines the outcome (Boss, 1988). Thus, family coping can also be described as a process

variable, to which a family manages stress through the utilization of its resources.

Family coping has been formally defined by Boss (1988) as the “management of a stressful event or situation by a family as a unit with no detrimental effects on any individual in that family” (p. 60). Boss explained that all families would face normal developmental stressor events. However, not all events would automatically indicate crisis as an outcome. The family’s collective and effective management of a stressful situation determines successful adaptation.

In looking at the management of stress in individuals, Lazarus (1966) highlighted the importance of values, beliefs, expectations, and motivations that comprise individual coping strategies. Lazarus conceived coping behavior as a cognitive process that led to an emotional response. Individuals then deal with that emotion evoked by the processing of the stressful event by either managing the stressor itself, and/or trying to control the emotion by covering it up. Boss (1988) extended Lazarus’s explanation to family coping, and further defined family coping as the “cognitive, affective, and behavioral process by which individuals and their family system as a whole manage rather than eradicate stressful events or situations” (p. 60-61). The thoughts, emotions, and behaviors all shape the coping strategy of the family.

Family coping can also be defined according to two different dimensions, active and avoidant (Billings & Moos, 1982). Active strategies are used to cognitively, behaviorally, or emotionally impact the stressor. Avoidant strategies are utilized in order to remove the individual from the source of the stressor. McCubbin, Thompson, and McCubbin (2001) further delineated family coping into five domains: (1) acquiring social support; (2) seeking spiritual support; (3) mobilizing the family to acquire and accept help, or seeking out community resources and accepting help from others; (4) cognitively reframing events as manageable; and (5) passive appraisal, or accepting problematic situations while minimizing reactivity. They suggested that active coping strategies such as seeking social, spiritual, or community support, or reframing are associated with positive family adjustment, whereas passive coping strategies, such as passive appraisal, are associated with negative family adjustment.

In related research, passive appraisal has been reported to be related to increased levels of parenting stress than other coping strategies (Barnett, Hall, &

Bramlett, 1990). Parents with higher levels of stress were more likely to respond with passivity and inactivity (Bramlett, Hall, Barnett, & Rowell, 1995). Lustig (2002) studied parents of children with various disabilities, and also found that less frequent use of passive appraisal and more frequent use of reframing were associated with successful family adjustment. In a study on families with young children, mothers who reported fewer stressors utilized more social support from friends and family (McKelvey, Fitzgerald, Schiffman, & Von Eye, 2002). Finally, in a study comparing married and divorced parents, Hilton and Desrochers (2002) found that a disruptive event, such as divorce, causes deficits in family coping resources and, in turn, had a detrimental effect on parental control and the quality of parenting.

A family's coping response is shaped by previous experience with stressful situations (Boss, 1988), as well as the flexibility, cohesiveness, and communication ability of the family. McCubbin et al. (1987) studied the flexibility, cohesiveness, and communication ability of the family system in relation to the family's coping behaviors. Families that were more flexible in their ability to change, more cohesive as a family unit, and better able to communicate with each other were better able to cope with stressful situations more effectively. Families who displayed low levels of flexibility, cohesiveness, and communication were prone to rapid disintegration when faced with a stressor. Families possessing a midlevel range of flexibility, cohesiveness, and communication may find these levels deteriorating to a lower degree if placed under too much stress (Olson, 1993). Therefore, families dealing with multiple and repeated stressors are more at risk for a crisis response, especially in light of waning levels of flexibility, cohesiveness, and communication.

The overall aim of coping is to maintain or strengthen the stability of the family and the well-being of the family members (McCubbin & McCubbin, 2001). According to McCubbin, Thompson, and McCubbin (2001), coping facilitates successful adaptation in four ways: (1) utilizes direct action to eliminate or reduce the stressor, (2) mobilizes direct action to obtain additional resources, (3) manages the tension associated with the stressor, and (4) appraises and redefines the stressor to make it more constructive, meaningful, manageable, and acceptable. In light of the various dimensions and domains of coping behaviors, coping strategies that are effective are those that remove



the problem situation or alter the perception of coping ability (Wills, Blechman, & McNamara, 1996). On the other hand, ineffective strategies alienate sources of support, fail to remove the problem situation, or lead to negative attitudes about personal attributes or coping ability (Wills et al., 1996). This knowledge can help provide successful interventions for families and help to reduce a family's susceptibility to crisis.

Orfus and Howe (2008) explored family coping styles reported by parents and sibling stress appraisal in families of children with disabilities. These disabilities included Down syndrome, Autism, and Cerebral Palsy. Siblings felt most stressed when embarrassed by the child with ADHD in front of friends, and felt happiest when playing with the child. Wishful thinking was a common coping strategy for siblings during stressful times. Families relied on internal family coping methods the most, citing "accepting stressful events as a fact of life" as the most used strategy. An active problem-solving strategy was the second most common coping style used by parents. Parental acceptance was surmised as helpful in influencing the family's ability to practically and realistically deal with their problems.

#### Sense of Coherence

The "C" factor in the proposed model refers to the definition of events, or how one perceives their situation. One way that individuals define and facilitate making sense out of the stressors they face is through the development, over time, of a strong sense of coherence. Antonovsky (1979) defined sense of coherence (SOC) as the "extent to which one has a pervasive, enduring though dynamic, feeling of confidence that one's internal and external environments are predictable and...a high probability that things will work out as well as can be reasonably expected" (p. 123). In daily life, this concept can be thought of as an "I can do it" or "I can handle it" attitude.

Antonovsky (1987) further explained SOC through three core components: (1) comprehensibility, or the ability to understand and comprehend the situations of life; (2) manageability, or the ability to manage demands; and (3) meaningfulness, the ability to derive meaning from the situations and demands that one confronts. Incorporating these three components, the sense of coherence is the extent to which individuals view their own world as comprehensible, manageable, and meaningful. Individuals with a strong SOC possess high levels of each of the three components. By having a strong

SOC, an individual has the motivational and cognitive bases to clarify the situation, anticipate possible demands, and to activate potential resources into action (Antonovsky & Sourani, 1988). Furthermore, the individual views the situation as worthy of their time and investment.

SOC is not a specific coping style, but rather provides the orientation for selecting coping behaviors that are judged to be appropriate (Antonovsky & Sourani, 1988). However, individuals with a weak SOC may experience diminished coping abilities and thus may perceive the world as more stressful. Whereas coping and sense of coherence are important as individual factors, it is the combination of these variables that contribute to a person's overall experience with stress. The appraisal of the situation and an individual's ability to handle it affect how much stress is experienced (McCubbin & McCubbin, 1996).

Sense of coherence has been linked to a variety of variables, including well being. In a study of married and divorced mothers, the well being of both groups was predicted by sense of coherence (Cohen & Dekel, 2000). Both divorced and married mothers in this study had a similar SOC level at the group level. Mothers with a higher SOC used more effective coping strategies and experienced more benefit from the strategies they used. Lavee, McCubbin, and Olson (1987) found that families who show a high SOC had more positive measures of family functioning and higher levels of well being. In another study, families with a higher SOC reported a better quality of life (Anderson, 1998). Finally, Flannery and Flannery (1990) also reported that sense of coherence correlated negatively with life stress, anxiety, and depression.

Sense of coherence has also been examined with parents of children with disabilities. In a study of parents of children with Down's syndrome, parents with high SOC scores experienced significantly less self-perceived stress (Hedov, Anneren, & Wikblad, 2002). Mak, Ho, and Law (2007) found similar results with mothers of autistic children, reporting that mothers with a strong SOC perceived lower stress than matched control respondents. In examining mothers of children with developmental disabilities, Gottlieb (1998) reported that single mothers with a high SOC were less depressed, had greater parental satisfaction and well being, and had fewer health problems than single mothers with a lower SOC. With a similar sample, Olsson and Hwang (2002) found that

parents of children with intellectual disabilities with a low SOC were at an increased risk for developing depression compared to control parents. In an updated study, Olsson, Larsman, and Hwag (2008) supported a correlation between SOC and well-being. They found that both parents of children with intellectual disabilities as well as parents of children without disabilities who experienced a lower SOC reported lower well-being.

Overall, SOC is an evolving process, in which repeated life experiences build up the SOC. As SOC is continually refined, it tends to stabilize by the age of 30 (Antonovsky, 1998). Studying parents after that age may lend to a consistent, reliable measure of SOC. With the combination of studies on parents of children with disabilities, as well as studies on measures of quality of life and well being, sense of coherence warranted exploration as a variable in the model of stress in this study.

#### Quality of Life

In the past quarter of the century, the research literature, as well as popular culture and media, has paid much attention to the topic of subjective well-being. Both the media and practitioners alike explore the question: “Are you happy with your life?” This overall sense of subjective well-being is thought of as a personal evaluation of one’s life (Diener, Suh, & Oishi, 1997). It has been identified as having three separate components: positive affect, negative affect, and life satisfaction (Andrews & Withey, 1976). The first two components reflect the emotional aspects of subjective well-being, whereas life satisfaction refers to the cognitive, judgmental process of evaluating well-being.

Life satisfaction, or quality of life, is seen as a “global assessment of a person’s quality of life according to his chosen criteria” (Shin & Johnson, 1978, p. 478). The individual sets his or her own standards in determining satisfaction with his or her life. Then, that person compares his or her perceived life circumstances with the self-imposed standards, and the degree to which these conditions match determines the report of life satisfaction (Pavot & Diener, 1993). Quality of life is thought of as a global measure, rather than a domain specific construct (Diener, 1984). Although domain-specific satisfaction can be assessed, individuals may place differing values on certain domains. Therefore, specific domains may carry more weight in some individuals than in others (Diener, Emmons, Larsen, & Griffin, 1985). Thus, to obtain a more comparable

measure, the emphasis is on an integrated judgment of an individual's overall life experience.

Quality of life is measured by looking at a person's opinion about their current life situation at a given time (Diener & Diener, 1995), and may fluctuate across time, and influenced by close relationships and stressors (Thabes, 1997). Mothers' satisfaction with life has been found to vary with their life cycle stage, economic situation, and their use of time (McCullough & Zick, 1992). In regard to gender and its influence on life satisfaction, researchers have reported no differences in life satisfaction between men and women (e.g., Aube, Norcliffe, Craig, & Koestner, 1995; Hunt, 1993; Seybolt & Wagner, 1997).

Quality of life has been found to be positively associated with marital status (married versus single or cohabitating), indices of general health, self-esteem, and euphoria (Arrindell, Heesink, & Feij, 1999). In addition, satisfaction with life has been negatively associated with socially prescribed perfectionism (Mitchelson & Burns, 1998) and neuroticism (Arrindell et al., 1999; Myers & Diener, 1998). Single parents have reported lower life satisfaction than married parents (Kitson & Morgan, 1990; Lee, Law, & Tam, 1999; McCullough & Zick, 1992).

Life satisfaction has also been connected with measures of stress and resources. Hamarat et al. (2001) reported perceived stress and coping resource availability to be moderate predictors of global life satisfaction. Within this relationship, perceived stress was a better predictor of life satisfaction for younger adults, whereas coping resource effectiveness was a better predictor of quality of life for middle-aged and older adults. Crnic, Greenberg, Ragozin, Robinson, and Basham (1983) indicated similar results, and found that mothers' perceived social support and life stress significantly predicted their general life satisfaction. Intimate and community support were the strongest predictors of quality of life, whereas friendship support was not significant.

Although research on parental quality of life in families of children with disabilities is commonly available (e.g., Milgram & Atzil, 1988; Sloper, Knussen, Turner, & Cunningham, 1991), literature on the quality of life of parents of children with ADHD is lacking. In the closest related study, Mouton and Tuma (1988) conducted a study of children in the early stages of assessment for behavior problems. They found that the

mothers of these identified children reported higher levels of parenting stress and less satisfaction in their parental role than mothers of children with no identified behavior problems. These mothers derived less satisfaction from being a parent and indicated less spousal support and less positive emotional and social parent-child relationships. In addition, they reported feelings of lessened parental competence.

As earlier identified in this chapter, parents of children with ADHD experience increased parenting stress. These parents experience numerous stressors that may affect overall quality of life. As perceived stress has been associated with greater depressive symptoms and lower life satisfaction (Chang, 1998), further exploration with these families is needed.

### Conclusion

Parents of children with ADHD experience common stressors that every parent faces, however, they may also experience these stressors at a more frequent rate. In addition, the demands specific to parenting a child with ADHD bring on their own unique stressors. As such, prior researchers have found that parenting stress is higher in parents of children with ADHD. An exploration of the daily parenting hassles these parents face may bring light to the typical demands on a parent of a child who has ADHD.

There is reasonable evidence to suggest that having a child with ADHD can influence parent behavior and adjustment, and in the reverse, parenting behavior can impact the presentation of ADHD symptomatology (Johnston & Mash, 2001). Other family characteristics, such as marital conflict, have shown to have an inconsistent relationship to ADHD. Even less is known about the sibling relationship among children who have ADHD, and its possible influence over parenting variables such as stress. Considering both the prevalence of ADHD, as well as the importance of the sibling relationship in social development, further exploration of the sibling relationship quality among the other family resources within these families was warranted.

The next step was to examine the contributions of parenting stress and what may assist families in successful stress management. This study investigated the variability in coping with stress by understanding the ways in which the outlined variables influence the outcome, or quality of life, in parents of children who have ADHD.

## CHAPTER THREE

### METHODOLOGY

The focus of this study was to investigate the influence of family stress on quality of life for parents with a child who has ADHD. Based upon the model described by Family Stress theory, the factors relating to quality of life were assessed as follows: (a) parenting daily hassles, (b) family coping, (c) sibling warmth, (d) parenting stress, and (e) sense of coherence. Survey research methods were employed to obtain these measures. The sections of this chapter explored the following methodology of this research: sample, instrumentation, data collection, and data analysis.

#### Sample

The original population of interest for this study consisted of mothers with at least two children under the age of 18 living in their household. One of the children must have been diagnosed with ADHD. Data were collected from fathers. However, a large enough sample was not obtained from fathers and thus, mothers and fathers could not be compared as two separate groups. Therefore, only data from mothers were used in the main analyses of this study.

To obtain a sample of this population, the researcher employed purposeful sampling techniques in order to secure participants that met the specific requirements necessary for inclusion in the study. Parent leaders of parent-to-parent education classes on parenting strategies for children with ADHD were contacted via a national email listing. These parent leaders are affiliated with CHADD, a national organization that supports children and families with ADHD. There were 146 parents on this email listing. However, the family constellation of each parent was unknown at the time of recruitment. The parent leaders were asked to participate in this study if they met the qualification of having at least two children, one of whom has ADHD.

In addition to utilizing the responses from these parent leaders, the researcher also asked these leaders for their assistance in participant recruitment. The majority of these leaders were also the head of their local chapter of CHADD. These leaders were asked to announce this study to the members of their local chapters. Many leaders opted not to participate in participant recruitment. However, for the leaders who did

participate, permission was granted to post announcements on the chapters' online discussion boards. Using this additional method to enhance the sampling increased the sample size and opened the possibility for a greater number of potentially completed responses.

The researcher also identified other parenting support groups and practitioners that work with parents of children who have ADHD. Some of these support groups solely existed in an online format, whereas other groups met in person as well as in an online forum. The leaders of these groups were contacted for permission to recruit parent participants from their groups. The researcher asked for permission to post a link to the survey on their online discussion boards and newsletters. For the groups that met face-to-face, the researcher also sought time during a meeting to recruit participants. However, the parenting groups did not agree to any face-to-face contact with the researcher. Group leaders and practitioners did allow the researcher to post an online advertisement of the study on their online newsletters, websites, blogs, and discussion boards.

### Sample Size

Sample size for this study was calculated based on a review of several formulas in statistical research. In looking at path analysis as a special case of regression, Green (1991) provides a comprehensive overview of the procedures used to determine regression sample sizes. He suggests  $N > 50 + 8m$  (where  $m$  is the number of independent variables) for testing the multiple correlation and  $N > 104 + m$  for testing individual predictors. This measurement is based on the assumption of a medium sized relationship. Therefore, based on inclusion of five independent variables in the current research, 90 respondents would be needed to test the multiple correlation and 109 respondents would be needed to test individual predictors in the model per group.

Cohen (1992) also proposed recommendations for adequate sample sizes. According to Cohen, a five-predictor multiple regression model would require a sample size of 112 in order to have a medium effect size and a power of .80. This recommendation is in line with Green's proposed sample size. Therefore, the aim of this study was to secure approximately 110 respondents.

### Instrumentation

After a review of the literature on family measurement assessments, the researcher selected established instruments to measure each of the variables of interest. As it is understood that no variable can be measured without error, the instruments selected for use in this proposed study were chosen based on reliability coefficients that generally exceeded .80. This level of reliability meets the recommended minimum standards for measurement error within the behavioral and social science fields (Brewer, 1996). Each variable in the proposed model was measured by a corresponding scale as described below.

#### Demographic Information

Demographic information was collected at the end of the survey through an information list of questions constructed by the researcher (Appendix A; items 1-15). Examples of demographic information included age, gender, ethnicity, marital status, level of education, occupation, number of children in the home, and their birth order. In addition, information regarding the child's type of ADHD, other comorbid disabilities, and medication was obtained. The end of the survey also included two open-ended questions, asking parents if there was anything additional they would like to share (Appendix A; items 16-17).

#### Parenting Daily Hassles Scale (PDH)

The Parenting Daily Hassles Scale (PDH), developed by Crnic (Crnic, 1990; Crnic & Greenberg, 1990), was used to measure the amount of stress related to child care that parents perceived they had experienced over a specified time. The PDH scale was designed to assess the minor daily stressors in routine interactions with children. This scale set out to measure parents' perceptions of frequency and personal distress caused by typical but potentially annoying tasks and behaviors of their children.

The PDH is a 20-item Likert-type questionnaire on which parents reported which of a series of typical everyday events in parenting and parent-child interactions occurred during interactions with their children (Crnic & Greenberg, 1990). Items were responded to on a 5-point scale with options ranging from 1 = never to 5 = constantly. The results of these responses were referred to as a dimension of frequency. For each item, parents were also asked how hassled they felt by the event over the past few weeks,



with responses scored 1-5 and ranging from 1 = no hassle to 5 = big hassle. Results of these responses were referred to as intensity. Frequency and intensity scores range from 20 to 100.

Crnic (1990) reported the PDH scale to have good internal consistency. Based on reports from three data sets, Cronbach's alphas ranged from .80 to .89 for the frequency scale and .89 to .93 for the intensity scale. For this study, Cronbach's alpha was .88 for the frequency scale and .88 for the intensity scale. Crnic and Greenberg (1990) reported the Cronbach's alpha ratings of all 20 items were .81 for frequency and .90 for intensity. The two scales were highly correlated ( $r = .78$ ). Construct validity was found by completing a factor analysis of child, parent, and family factors. In demonstrating divergent validity, Crnic and Greenberg found that child behavior problems and parenting daily hassles were measures of separate constructs. No data on test-retest reliability were found. The researcher obtained written permission from the author for the use of the PDH in this study.

#### Family Crisis Oriented Personal Evaluation Scales (F-COPES)

Family coping was assessed using the Family Crisis Oriented Personal Evaluation Scales (F-COPES) (McCubbin, Olson, & Larsen, 1987). The F-COPES is a 30-item Likert-type questionnaire designed to identify problem-solving and behavioral strategies utilized by families in difficult or problematic situations. Items are arranged into following five subscales: acquiring social support, seeking spiritual support, mobilizing the family to acquire and accept help, reframing, and passive appraisal. The responses range from 1 = strongly disagree, 2 = moderately disagree, 3 = neither agree nor disagree, 4 = moderately agree, and 5 = strongly agree.

The F-COPES examined two levels of interaction: (a) the individual to the family system, or the ways a family member internally handles difficulties and problems among its members; and (b) family to social environment, or the ways in which the family externally handled problems or demands that emerged outside its boundaries, but affected the family system (McCubbin, Larsen, & Olson, 1991). The items were also grouped into two dimensions: internal coping patterns which incorporate reframing and passive appraisal, and external coping patterns, which were comprised of the spiritual support, social support, and family mobilization subscales.

A total coping score is calculated by summing the number selected for each item, with the exception of four specific items. Items 12, 17, 26 and 28 are reversed scored in order to have the same direction as the rest of the items. In the original administration of the F-COPES, the Cronbach's alpha for internal consistency reliability was .83. Test-retest reliability was reported to be .81 for the total scale (McCubbin et al., 1987). The F-COPES has construct validity, as derived from a factor analysis. Cronbach's alpha for this study was .82. No data on test-retest reliability were found. The researcher obtained written permission for the use of this instrument.

### Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ)

The Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (PEPC-SRQ) (Kramer & Baron, 1995) was used to measure sibling warmth. This questionnaire was divided into two sections. The first section, known as parental standards, asked parents to rate how often they expect certain behaviors to occur in a 'good' or 'ideal' sibling relationship. The second section, known as parental perception, asked parents to rate how often the same behaviors actually occurred in their own children's relationship. Parents used a 5-point Likert scale (1 = Never to 5 = Always) to answer the frequency of these behaviors. The difference between parental standards and parental perceptions can also be calculated as a discrepancy score, known as sibling relationship quality.

The behaviors listed among the items in the PEPC-SRQ were divided into three subscales: warmth, conflict, and rivalry. The warmth subscale was used in this present research. This subscale consisted of 13 items in each section (13 items in the parental standards section and the same 13 items in the parental perceptions section) for a total of 26 items. Reliability measures were computed separately for each of the three standards. In regard to sibling warmth, Cronbach's alpha was .86 for parental standards and .86 for parental perceptions. Test-retest reliability on sibling warmth over a three-month period was .74 for parental standards and .71 for parental perceptions. The PEPC-SRQ has demonstrated concurrent validity with the Sibling Relationship Questionnaire (Furman & Buhrmester, 1985) and the Sibling Relationship Inventory (Stocker & McHale, 1992). For this study's measure of sibling warmth, Cronbach's

alpha was .91 for parental standards and .91 for parental perceptions. For sibling conflict, Cronbach's alpha measured at .88 for parental standards and .90 for parental perceptions for this study.

The PEPC-SRQ has been used for parents of children between the ages of 14 months and 9 years, as well as parents of children ages 11 to 17 years old. This scale has been used with both mothers and fathers. Permission from the author of the PEPC-SRQ has been obtained for use in this study.

#### Parental Stress Scale (PSS)

Parenting stress was measured by the Parental Stress Scale (PSS) (Berry & Jones, 1995). The PSS is a questionnaire that measures the levels of stress parents experience as a result of having children. This instrument focuses on stress generated specifically by the parenting role. The PSS consists of 18 items that describe the parent-child relationship and the parent's feelings regarding it. Items are responded to on a 5-point Likert-type scale that ranges from 1= strongly disagree to 5= strongly agree. Items are organized into four subscales including: closeness with children, satisfaction with the parental role, positive and negative emotions associated with being a parent, and difficulties associated with parenting. Scores range from 18 to 90, with lower scores representing less stress associated with parenting and higher scores indicating higher parenting stress levels. Select items need to be reverse coded, including items: 1, 2, 5, 6, 7, 8, 17 and 18.

Berry and Jones (1995) have reported the scale to be appropriate for use with both mothers and fathers. In administering the PSS to both the mother and father of the same household, no significant gender related differences were found. In the reliability studies, the internal consistency was assessed at a Cronbach's alpha of .83. For the present study, the Cronbach's alpha was .87. The test-retest reliability for the PSS after a six-week period was measured at  $r = .81$ . In determining concurrent validity, Berry and Jones found that scores on the PSS were significantly correlated with scores on other stress instruments, including the Parenting Stress Index (Abidin, 1986) and the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983). No data on test-retest reliability were found. The researcher obtained written permission from the author for the use of the PSS in this study.

### Orientation to Life Scale (OLS)

Sense of coherence was measured using The Orientation to Life Scale (OLS) (Antonovsky, 1987). Sense of coherence is described by Antonovsky (1979) as a sense of situational mastery. Three factors exert a collective influence over a sense of coherence: comprehensibility, manageability, and meaningfulness. These factors are included as subscales to the OLS. The OLS is a 13-item Likert-type scale with responses ranging from 1= rarely or never true; 2=occasionally true; 3=often true; 4=usually true; and 5=true most of the time.

The internal consistency of this scale ranges from .84 to .93, with the scale's reliability reported as  $r = .81$  (Antonovsky, 1987). Both the long (20-item) form and the short (13-item) form have been found to be reliable (Antonovsky, 1993). In addition, strong criterion validity has been demonstrated (Feldt & Rasku, 1998). For the present study, Cronbach's alpha was .87. This instrument is in the public domain and is not copyrighted. Therefore, permission to use this instrument is not required.

### Satisfaction with Life Scale (SWLS)

The Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985) was used to measure the quality of life of mothers and fathers. The SWLS is a short, five-item questionnaire designed to measure global cognitive judgment of one's life. The SWLS was developed to assess satisfaction with the respondent's life as a whole. The items on the SWLS are global rather than specific to certain domains in life. The global nature of this instrument allows respondents to weigh domains of their lives in terms of their own personal subjective values (Pavot & Diener, 1993). The SWLS generally requires about one minute of respondent time to complete. This instrument is in the public domain and is not copyrighted. Therefore, the author has expressed that researchers can use this instrument without permission.

The SWLS uses a Likert-type scale that ranges from 1 to 7 (1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neither Agree nor Disagree, 5 = Slightly Agree, 6 = Agree, and 7 = Strongly Agree). Each item is scored from 1 to 7, with a total score ranging from 5 to 35. Higher scores indicate a higher satisfaction with life, whereas lower scores indicate a dissatisfaction with life. This instrument was presented as the first set of questions the respondent answered. Respondents are less likely to be

influenced by responses to the other instruments if this instrument is completed first.

In reviewing the reliability of the SWLS, Diener et al. (1985) found a two-month test-retest reliability of their original sample to be  $r = .82$ . For internal consistency reliability, Diener et al. (1985) displayed a Cronbach's alpha of  $.87$ . Similar results have been found in later studies, including Alfonso, Allison, and Rader (1996) (Cronbach's alpha =  $.89$ ,  $r = .83$ ) and Pavot, Diener, Colvin, and Sandvik (1991) (Cronbach's alpha =  $.85$ ,  $r = .84$ ). Thus, the measures of both forms of reliability have shown to be strong. Pavot and Diener (1993) also reported adequate convergence validity with numerous measures of well-being and life satisfaction. The present study generated a Cronbach's alpha of  $.90$ . The SWLS has been found to be unrelated to gender and age (Arrindell, Meeuwesen, & Huysse, 1991; George, 1991; Pavot et al., 1991).

#### Data Collection

Data were collected through parental responses to researcher-constructed demographic questions and questions from the instruments in the previous section. The questions were presented in an online format through the use of SurveyMonkey online survey company. SurveyMonkey is web-based software that is used to create a database of survey questions. Survey responses were collected in a file in a password-protected secure area on the website. Once data were collected, they were imported into an Excel file offline.

Permission to conduct this study was obtained through the Florida State University Institutional Review Board (Appendix B). Participants were recruited through various parenting groups and online parent newsletters. The researcher obtained permission from the organizers and leaders of the parenting groups and newsletters to recruit participants from their groups. Permission was also received from the Professional Advisory Board of CHADD to recruit participants from local CHADD chapters. Group leaders allowed the researcher to post an online advertisement of the study on their online newsletters, websites, blogs, and discussion boards. CHADD posted a link to the survey on their research study page for further participant recruitment.

A simple domain name was purchased to aid in the dissemination of the survey link. The online advertisement of the survey included this simple domain name that

would serve as a gateway between the advertisement and the SurveyMonkey link. The online advertisement of the survey also included a brief description of the study, with participant requirements and incentive details. Once the participant clicked on the link, he or she was taken to the front page of the study, which was the cover letter (Appendix C). This first page of the website described the survey, explained confidentiality, and described the voluntary nature of the study. After reading the cover letter, participants clicked on a link at the end of the page that took them to the survey hosting on SurveyMonkey. Once on the survey site, participants were presented with the second page of the survey that asked for their informed consent through an electronic input of their initials that represented their online signature (Appendix C).

A total of 265 people opened the survey link and gave consent to begin the assessments. However, as the survey continued, some participants abandoned the survey. Some respondents answered initial questions and then quit, while other respondents completed half the survey, but did not continue. In addition, a few survey forms had to be discarded because the respondents only had one child in the family or the person's spouse had already filled out the survey. The final sample consisted of 114 participants who completed the survey in its entirety.

The response rate based on the number of people who initially accessed the survey link was 43%. It was unknown how many people received the survey link, but chose not to click on it and thus not participate. That number was estimated to be far greater than 265 people due to the locations that the survey link was posted. There were also a number of parent groups who refused permission to post the survey link or allow the researcher to talk to parents in their groups. One spokesperson explained that their parents were too busy to fill out surveys and "have enough questions and problems." A larger sample would have been procured if more cooperation was established with these parenting groups.

#### Incentive

To encourage parents to participate, the researcher offered an incentive by way of entry into a drawing. At the end of the online survey, parents were directed to a new screen. On this screen, parents were offered the option to enter a drawing for one of two \$50 gift cards to Target stores or Amazon.com. If a parent opted for participation in

the drawing, he or she was only asked for their email address. Parents were informed that their personal information was not connected to their responses and thus their responses would remain anonymous. Upon conclusion of the collection of all of the survey data, two parents were randomly selected to receive the gift cards. Random numbers were generated from [www.random.org](http://www.random.org) in order to assist in the selection of the winners. The parents were contacted via email to inform them of their prize and ask for their gift card preference. Gift cards were then distributed to the two parents.

#### Pilot Testing

To ensure questionnaire usability and accuracy, the researcher deployed the online survey as a pilot test to five parents. These parents were selected through the researcher's social and professional networks. Parents were asked about the survey's readability, flow, organization, time for completion, and any technical execution issues. The parents also indicated how much time they took to complete the survey. The researcher used this feedback to correct information, structure, process, and flow to the best extent possible.

#### Data Analysis

Path analysis using AMOS 17.0 software was used to test the model. The model incorporated recommended modifications as indicated by the analysis. The researcher employed descriptive data analysis using PASW 17.0 (formerly known as SPSS) to report demographic information and other characteristics of the sample. Descriptive data analysis incorporated the use of frequency distributions, means, ranges, and standard deviations. Qualitative data analysis through the determination of themes was used for the open-ended questions.

## CHAPTER FOUR

### RESULTS

The purpose of this study was to investigate the influence that stress, as conceptualized by the ABC-X model, has on quality of life in mothers of children who have ADHD. Mothers were analyzed in terms of the intensity of their parenting hassles, family coping, sibling warmth, parenting stress, sense of coherence, and quality of life. Sibling conflict was added as an area of interest for correlation purposes. As the number of fathers completed the survey was not large enough to include as a comparison group, their data were not included in the overall sample. However, a brief summary of descriptive statistics on the fathers' responses was provided.

This chapter is organized into five sections. The first section includes descriptive statistics and characteristics of the sample. The second section describes the variables included in the model for the study. The third section provides the results of the path analysis. The fourth section lists related findings. The fifth section gives a summary of the findings of this study.

#### Sample

A brief summary of general demographic characteristics of the sample is included in Table 1. Analysis is given in terms of marital status, type of parent, ethnicity, education level, family income level, number of children in the household, employment status, and ordinal position of the child who has ADHD in the family.

A total of 103 mothers completed the survey in its entirety. The mothers ranged in age from 19 to 58 (mean age = 38.7), with a median age of 38. In reporting marital status, 78 mothers stated that they were married, whereas 20 mothers indicated that they were either divorced, separated, or widowed. The majority of mothers sampled (86.4%) were the biological parent of the children of interest in the study. Nine of the mothers had both biological and step-children in their family, and 5 of the mothers indicated they were the adoptive parents of their children. A total of 90 mothers who completed the survey identified themselves as White/Caucasian. Very few mothers of ethnicities other than White/Caucasian (12.6%) filled out the survey.



Table 1

*Demographic Characteristics of Mothers*

Variables	n	(%)
<b>Marital Status</b>		
Never Married	9	(8.7)
Married	78	(75.7)
Widowed	1	(1.0)
Separated	3	(2.9)
Divorced	7	(6.8)
Living with Partner	5	(4.9)
<b>Type of Parent</b>		
Biological	89	(86.4)
Biological and Step-parent	9	(8.7)
Adoptive	5	(4.9)
<b>Race/Ethnicity</b>		
Asian/Pacific Islander	3	(2.9)
Black/African-American	3	(2.9)
Hispanic/Latino	3	(2.9)
White/Caucasian	90	(87.4)
Multi-Ethnic	1	(1.0)
Other	3	(2.9)
<b>Education</b>		
GED	5	(4.9)
High School Diploma	27	(26.2)
Associate Degree	23	(22.3)
Bachelors Degree	30	(29.1)
Masters Degree	11	(10.7)
Advanced Degree	7	(6.8)
<b>Family Income</b>		
< \$15,000	8	(7.8)
\$15,001 - \$30,000	11	(10.7)
\$30,001 - \$45,000	6	(5.8)
\$45,001 - \$60,000	15	(14.6)
\$60,001 - \$75,000	11	(10.7)
\$75,001 - \$90,000	19	(18.4)
\$90,001 - \$105,000	9	(8.7)
\$105,001 - \$120,000	10	(9.7)
> \$120,000	14	(13.6)

Table 1

*Demographic Characteristics of Mothers (continued)*

Variables	n	(%)
<b>Employment Status</b>		
Full-Time	40	(38.8)
Part-Time	26	(25.2)
Non-Employed	37	(35.9)
<b>Number of Children in Household Full-Time</b>		
1	5	(4.9)
2	60	(58.3)
3	23	(22.3)
4	9	(8.7)
5	4	(3.9)
6	1	(1.0)
<b>Ordinal Position of Child with ADHD</b>		
Oldest	44	(42.7)
Youngest	17	(16.5)
Middle	8	(7.8)
Multiple Children Have ADHD	22	(21.4)
Only Child in Home Full-Time	3	(2.9)

When income levels were analyzed, a sizeable portion of the sample possessed a college degree in some form (68.9%). No mothers reported any education level less than a GED. Education levels for high school diploma (26.2%), associate degree (22.3%), and bachelors degree (29.1%) were similar in number. In regard to income levels, there was no clear majority of any level in the sample. Eight families fell below the \$15,000 level, with a slightly larger number of 14 families possessing an income of greater than \$120,000. The largest group of the sample consisted of 19 families in the \$75,001 to \$90,000 level.

Mothers ranged in employment status from being employed full-time at 38.8%, part-time at 25.2%, and unemployed at 35.9%. Of the mothers who worked, seven of them reported they worked from home on a full-time basis, and nine of the mothers

worked from home occasionally. In regard to the mothers' spouses, 78.6% were employed and 5.8% were unemployed. The remainder of the mothers did not have a spouse.

The majority of mothers in the sample indicated that there were two children living in the household full-time (58.3%). Families with three children in the household were the next common group at 22.3%, with families of four children comprising 8.7% of the sample. Some families had as many as five (3.9%) or six (1%) children. Interestingly, three families reported only one child living in the household full-time, as there were step-children and half-siblings living in the home on a part-time basis.

The ordinal position of the child who has ADHD in the family varied, with the majority of families having the oldest child as the one who has ADHD (42.7%). For the other ordinal positions, 16.5% of mothers reported the youngest child as the one who has ADHD, whereas 7.8% indicated the middle child as the one who has ADHD. Twenty-two families (21.4%) reported having more than one child in the family who has ADHD.

The age of the child with ADHD ranged from 3 to 18 years of age, with a mean age of 10.35 and a median age of 9. At the time of diagnosis with ADHD, the children's ages ranged from 1 to 18 years of age. The mean age at the time of diagnosis was 6.6, with the median age of 6. The majority of children diagnosed with ADHD in the sample were male (82 males, or 67.2%), with 40 of the children being female (32.8%).

Mothers were also asked about the type of ADHD that their children had. The majority of mothers indicated their children were diagnosed with combined type ADHD (81 of the children, or 66.4%). There were 14 children with hyperactive-only ADHD (11.5%), and 25 children with inattentive-only type ADHD (20.5%). In the case of two children, mothers indicated that the type of ADHD was unknown (1.6%).

In regard to medication, 73 (70.9%) mothers indicated their children were on some type of prescription medication for ADHD. No medication for ADHD was reported by 29 (28.2%) of the mothers. In addition, comorbidity rates for other conditions and disabilities were recorded. Of the mothers in the sample, 54 (52.4%) indicated no other diagnoses or disabilities were present in their children. In the child who has ADHD, other psychoeducational or physical disabilities were indicated by 31 (30.1%) of the

mothers. The most common comorbid disorder listed was Oppositional Defiant Disorder (29%). Ten mothers (9.7%) indicated no other disabilities present in the child who had ADHD, but reported other children in the family possessing psychoeducational or physical disabilities. Finally, five (4.9%) mothers indicated that in addition to their children with ADHD having other disabilities, their other children also possessed disabilities.

### Description of the Variables

Quality of life was delineated as the dependent variable for this study. Five predictor variables were thought to influence the quality of life of mothers. Those predictor variables were the following: intensity of parenting daily hassles, level of family coping, level of sibling warmth, level of parenting stress, and sense of coherence. These variables were chosen because they fit within the constructs of the ABC-X Model of Family Stress. Included in this model, the A-factors represent stressors, B-factors represent coping resources, C-factors represent definition of events, and X-factors represent levels of adaptation. The model used for this study was designed to determine the levels of parenting daily hassles, coping, sibling warmth, parenting stress, sense of coherence, and quality of life for the parents surveyed. Table 2 includes the range of levels for each variable studied.

Stressors defined the first level of variables within the hypothesized model. As an A-factor, stressors influence all other factors within the model. Stressors were measured through the level of parenting daily hassles the respondents experienced. Parenting daily hassles are characterized by the minor daily stressors in routine interactions with children. The Parenting Daily Hassles Scale measures both parents' perceptions of frequency and intensity of these hassles. To represent stressors for the purpose of the proposed model, the intensity of parenting daily hassles was chosen over frequency of hassles. The more intense and emotionally-draining experiences of child rearing are hypothesized to have a greater effect on parenting stress than the more frequent, less intense issues of parenting. Higher scores on the intensity subscale indicate a greater personal distress caused by typical but potentially annoying tasks and behaviors of their children.

Table 2

*Potential Scale Ranges for Each Variable*

Variable	Scale	Ranges
Parenting Daily Hassles	Parenting Daily Hassles Scale (Intensity Subscale)	20 – 100
Family Coping	Family Crisis Oriented Personal Evaluation Scale	30 – 150
Sibling Warmth	Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire (Warmth Subscale)	13 – 65
Parenting Stress	Parental Stress Scale	18 – 90
Sense of Coherence	Orientation to Life Scale <sup>#</sup>	13 – 65
Quality of Life	Satisfaction With Life Scale	5 – 35

<sup>#</sup> Items reverse coded for predictive analysis only.

Coping resources constituted the second set of variables within the model used for this study. Family coping was assessed by the Family Crisis Oriented Personal Evaluation Scale. Greater scores on this scale indicated greater utilization of family coping resources among the parents surveyed. The level of family coping was a measure of how well stressful events were dealt with by the respondents and their families. As a coping resource, sibling warmth was chosen as an additional measure of family unity. Sibling warmth was assessed by the warmth subscale of the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire. Higher scores on this scale indicated greater levels of sibling warmth.

The definition of events consisted of the appraisal of stressors and coping, and is referred as the C-factor in this study. For this third set of variables used in this study, both parenting stress and sense of coherence were utilized in order to determine how parents viewed their current level of stress. Parenting stress was assessed by the Parenting Stress Scale, where higher scores reflected higher levels of stress. The second part of defining events was through the sense of coherence, which was measured by the Orientation to Life Scale. Lower scores on this scale indicated a better

sense of comprehension, manageability, and meaningfulness of life for the respondents. For predictive analysis purposes, these scales were reverse coded so that higher scores indicated greater well being and sense of coherence.

The level of adaptation that mothers experienced in parenting was assessed by the quality of life perceived by the mothers in the study. Quality of life was influenced by all of the other variables in the hypothesized model. The Satisfaction with Life Scale was used to measure global cognitive judgments that the mothers made of their lives. Higher scores indicated a greater perceived quality of life. A total of 7 mothers (6.8%) in this study indicated an extreme satisfaction with their life (score range 31 – 35). An equal number of mothers (24 mothers in each group, or 23.3% respectively) listed their quality of life at levels of satisfaction (score range 26 – 30) or slight satisfaction (score range 21 – 25). There were 6 mothers (5.8%) who indicated a neutral score of 20. More mothers exhibited scores above the neutral range (53.4%) than below the neutral score (40.8%). Mothers expressing slight dissatisfaction (score range 15 – 19) with their quality of life numbered at 25 (24.8%). There were 12 mothers (11.7%) that indicated dissatisfaction (score range 10 – 14) with their quality of life, and 5 mothers (4.9%) that reported an extreme dissatisfaction (score range 5 – 9) with their life.

#### Path Analysis

For the main research question, a path analysis was executed to assess the relationship of the variables in the proposed model. The model was analyzed using AMOS 17.0 and incorporated recommended modifications as indicated by the analysis. Mothers were evaluated in accordance with their reported intensity of parenting daily hassles, family coping strategies, sibling warmth, parenting stress, and sense of coherence as predictors for quality of life. Correlations coefficients, means, and standard deviations of the variables included in the model are provided in Table 3. Although there was a moderate correlation between parenting daily hassles and parenting stress, multicollinearity was not perceived to be a problem.

Significant correlations were found between the dependent variable, quality of life, and all of the independent variables in the model, with the exception of sibling warmth. When sibling conflict was added to the correlation analysis, it was found to be significantly correlated with quality of life. Sibling warmth and sibling conflict were not

significantly correlated with each other, thus reflecting their independence in measuring the quality of the sibling relationship. The intensity of parenting daily hassles was also found to be moderately correlated with sibling warmth, parenting stress, and sense of coherence.

Table 3

*Correlation Matrix, Means, and Standard Deviations of Major Variables in the Study*

Variables	1	2	3	4	5	6	7
1. Parenting Daily Hassles	1.0	-.129	-.183	.371**	.476**	-.244*	-.270**
2. Family Coping		1.0	.179	-.011	-.277**	.178	.247*
3. Sibling Warmth			1.0	.189	-.307**	-.137	.033
4. Sibling Conflict				1.0	.370**	-.187	-.221*
5. Parenting Stress					1.0	-.388**	-.351**
6. Sense of Coherence <sup>#</sup>						1.0	.343**
7. Quality of Life							1.0
Mean	56.5	100.5	40.1	24.7	46.2	50.7	21.2
Standard Deviation	13.4	14.8	9.9	6.6	11.2	8.0	6.9

\* $p \leq .05$     \*\* $p \leq .01$

<sup>#</sup> Reverse coded for analysis

In addition, parenting stress was significantly correlated with every other variable in the study, including sibling warmth and sibling conflict. As parenting stress increased, sibling warmth decreased and sibling conflict increased. No significant correlations existed between family coping strategies and a number of the variables. There was no

relationship between use of coping skills and sibling warmth, sibling conflict, and sense of coherence. Sense of coherence was not found to have a significant relationship with any variables other than parenting stress and parenting daily hassles.

Path analysis produces a measure of explained variability of the model ( $R^2$ ) and a coefficient ( $\beta$ ) for each path within the model. Goodness of fit model tests were calculated to determine how well the model fit the data collected. This analysis included the following goodness-of-fit indices: Pearson chi-square, Goodness-of-Fit Index (GFI), and Adjusted Goodness-of-Fit Index (AGFI). A chi-square probability value of greater than .05 indicates an acceptable fit (Kline, 2005). GFI measures how well a model fits when compared to no model at all (Mueller, 1996). A GFI of greater than 0.9 is considered a good fit of the data to a hypothetical model (Tate, 1998). The AGFI is the GFI adjusted for the degrees of freedom of the model. An AGFI greater than .90 also indicates a good fit (Bentler & Bonett, 1980). Finally, the root mean square error of approximation (RMSEA) was also collected. Hu and Bentler (1999) suggest that an RMSEA of .06 or lower to be indicative of a good fit between a proposed model and the observed data. Values greater than .08 represent a mediocre fit, whereas any value at .10 or above indicates a poor fit (MacCallum, Browne, & Sugawara, 1996).

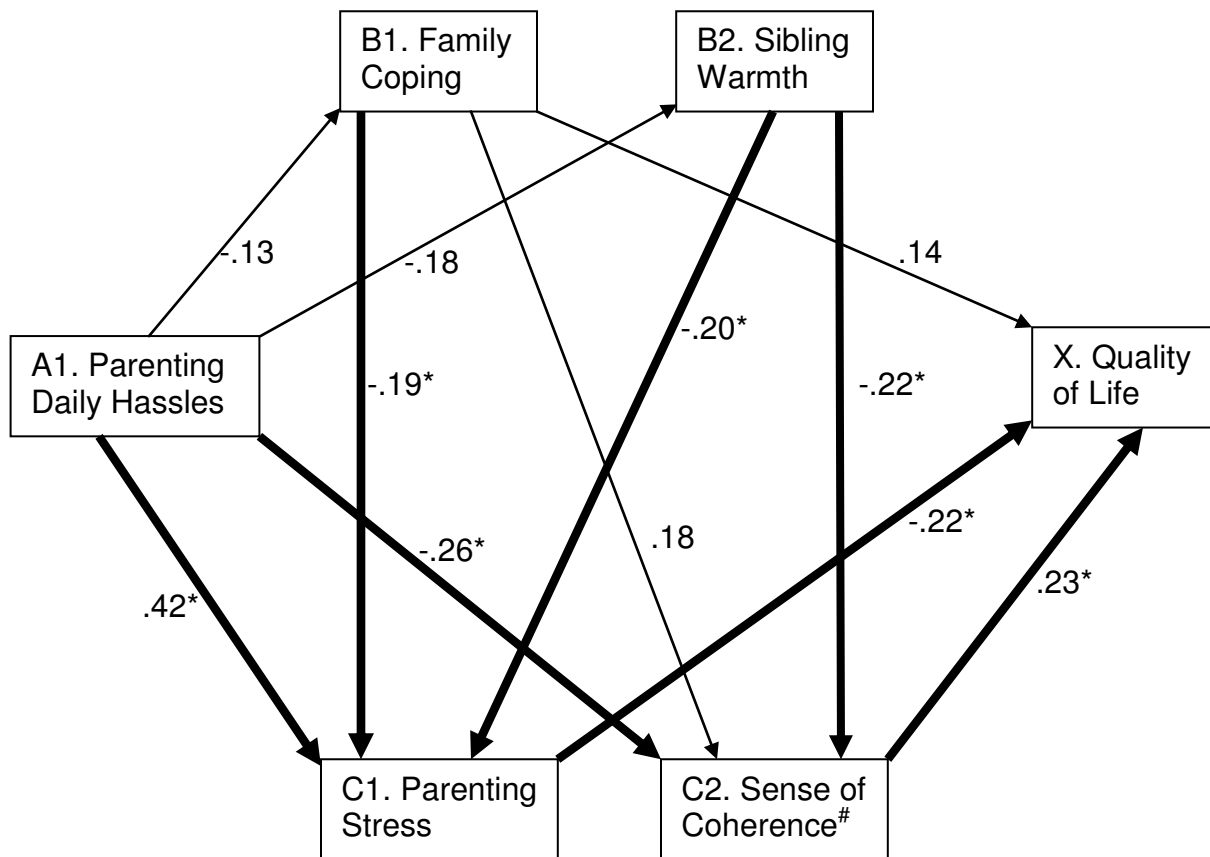
In determining optimal paths, modification indices were used to refine the model (Kline, 2005). As suggested by the modification indices as well the low correlation between sibling warmth and quality of life, the direct path was taken out between the two variables. The beta ( $\beta$ ) coefficients were non-significant at  $p \leq .05$ . Goodness-of-fit indices improved as a result of the adjustment.

The model's global chi-square statistic was 4.135 ( $df = 3$ ,  $p = .247$ ). The GFI was calculated at .987 and an AGFI of .907. With a GFI and AGFI greater than 0.9, it can be concluded that the hypothesized model fits the sample data well. RMSEA was 0.6, which also suggested a good fit. Thus, the observed data supported the research question for this study. This model explained 19% of the variance in quality of life ( $R^2 = .193$ ).

The path diagram for mothers with beta coefficients is provided in Figure 2. Quality of life was directly related to parenting stress and sense of coherence. There was a positive relationship between sense of coherence and quality of life, in that a



greater sense of coherence was related to a greater quality of life. On the other hand, parenting stress was inversely related to quality of life. Greater levels of parenting stress were related to lower quality of life. There was no direct relationship between family coping and sibling warmth with quality of life.



\* Significant at  $p \leq .05$  as indicated by the bold lines

# Reverse coded for ease of interpretation (high scores indicate high sense of coherence)

Figure 2. Model of Parenting Stress for Mothers of Children with ADHD

When looking at indirect relationships in the model, sibling warmth was mediated by parenting stress levels and sense of coherence in its relationship to quality of life. The more that sibling warmth was reported as being present in the sibling relationship,

the less parenting stress the mothers experienced, and the better their quality of life. Parenting stress mediated the relationship of parenting daily hassles and level of family coping with quality of life. When mothers experienced lower intensity levels of their parenting daily hassles, their parenting stress levels were also lower, and in turn, their quality of life was higher. Conversely, as mothers employed more family coping strategies, they experienced less parenting stress and reported higher levels of quality of life. Interestingly, sense of coherence mediated sibling warmth, but not in the anticipated direction. Mothers who reported a higher sense of coherence also indicated a lower level of sibling warmth.

The significant direct, indirect, and total effects for the model are presented in Table 4. The top factor influencing quality of life was sense of coherence, followed by family coping and parenting stress. The model accounted for approximately 19% of the observed variance in quality of life scores of the mothers in this study.

Table 4

*Direct, Indirect, and Total Effects on Quality of Life*

Variables	Direct Effects	Indirect Effects	Total Effects
A1 Parenting Daily Hassles	.000	-.181	-.181
B1 Family Coping	.145	.084	.229
B2 Sibling Warmth	.000	-.007	-.007
C1 Parenting Stress	-.220*	.000	-.220
C2 Sense of Coherence	.233*	.000	.233
* $p \leq .05$			$R^2 = .193$

Related Findings

Descriptive Data of Fathers

A total of eleven fathers completed the survey. This number was not large enough to form a comparison group with mothers. Therefore, only descriptive data of

fathers were provided.

Fathers ranged in age from 22 to 45 years old, with an average age of 34 years old. The majority of fathers listed themselves as the biological parent (7 fathers, or 63.6%), with three fathers (27.3%) indicating that they were both a biological father and step-parent, and one father describing himself as a step-parent only. Nine fathers (81.8%) in the study were married, with one father reporting as never-married and one father indicating that he was divorced. The majority of fathers possessed a bachelor's degree (7 fathers, or 63.6%). The rest of the educational levels had only one father in each group, with no fathers completing less than a high school diploma. Most of the fathers in this study identified themselves as White/Caucasian (8 fathers, or 72.7%), with two fathers (18.2%) indicating they were Asian/Pacific Islander, and one father describing himself as multi-ethnic. In regard to employment status, eight fathers (72.7%) were employed full-time, two fathers (18.2%) were employed part-time, and one father stated that he was unemployed. Family income levels ranged greatly, with fathers indicating total family income anywhere from \$15,000 - \$30,000 to over \$120,000. There were fathers in every income bracket listed on the survey. Of the fathers who were married, six of the men had spouses that were employed (66.7%).

All of the fathers surveyed had two children in their family. The children ranged in age from 2 to 17, with an average age of 6.6 years. The average age of the child who had ADHD was 7.8 years old. The gender of the child with ADHD was almost an even split, with 54.5% (6 children) being male, and 45.5% (5 children) being female. In addition, 54.5% of the families had the child with ADHD listed as the oldest child, whereas 45.5% of the families indicated the child with ADHD was the youngest. Three fathers (27.3%) listed other comorbid disabilities along with ADHD, and six fathers (54.5%) indicated their children were taking medication for ADHD.

In regard to the variables of interest, fathers had a mean score of 52 on the intensity of their daily parenting hassles, with a standard deviation of 17.8. When looking at the intensity of their daily hassles, fathers had a mean score of 56.5, and a standard deviation of 13.4. On family coping, fathers obtained a mean score of 96.2 on the F-COPES, with a standard deviation of 15.4.

On measures of the sibling relationship, fathers produced a mean score of 47.2

on sibling warmth with a standard deviation of 8.0 and a mean score of 18.8 on sibling conflict with a standard deviation of 6.1. For the variable of parenting stress, fathers had a mean score of 43.5 with a standard deviation of 8.8. In the measurement of sense of coherence that was reverse-coded, fathers demonstrated a mean score of 46.8 with a standard deviation of 11.1. Finally, in the area of quality of life, fathers had a mean score of 20.8 with a standard deviation of 8.5.

### Rank Ordering of Subscales

Rank order calculations were conducted to determine the frequency in which mothers utilized particular coping strategies. In addition, the different components of sense of coherence were ranked to shed light on what strategies mothers used most often in building their ability to handle life situations. Next, a listing of the most frequent parenting daily hassles, as well as the most intense was given. Finally, a ranking of the most commonly observed behaviors of the sibling relationship as determined by the mothers in this study was presented.

A rank ordering of the subscales for the family coping variable revealed which coping styles were utilized most frequently by the studied families. Mothers used the passive appraisal coping style most often (rank order = 3.81) in dealing with their life situations. Also included in the top three ranks of coping mechanisms were reframing (3.71) and mobilizing family support (rank order = 3.58). Mothers used these coping patterns more often than seeking spiritual support (rank order = 3.04). Mothers were least likely to acquire social support (rank order = 2.88) as a means for coping strategies. Overall, mothers employed more internal coping methods (rank order = 3.74) than external coping methods (rank order = 3.08).

When looking at sense of coherence, the rank ordering of subscales did not reveal much difference between the three core components. Overall, mothers experienced a similar level of comprehensibility in understanding situations of life (rank order = 3.99) and ability to manage demands (rank order = 3.93). Mothers were less confident in their ability to derive meaning from situations and demands they face (rank order = 3.79).

Areas of parenting daily hassles were analyzed to determine what hassles occurred most frequently and what hassles were determined to be highest in their

intensity. Overwhelmingly, the parenting daily hassle that was reported most frequently was “continually cleaning up messes of toys or food” (mean = 4.32). The other parenting daily hassles that occurred most frequently were “being ragged, whined at, complained to” (mean score = 3.88) and “the kids don’t listen- won’t do what they are asked without being nagged” (mean score = 3.88). In regard to intensity of the hassle, “being ragged, whined at, complained to” was indicated as the biggest degree of hassle (mean = 3.70). For the next level, “sibling arguments or fights that require a ‘referee’” were reported as the second biggest degree of hassle (mean = 3.53). Finally, “continually cleaning up messes of toys or food” were seen as the third biggest hassle (mean = 3.51) in intensity.

Aspects of the sibling relationship were also analyzed to determine frequency of observed behavior. Mothers ranked the following aspects of the sibling relationship as occurring most often: trying to control each other’s behavior (mean = 3.72), arguments (mean = 3.65), talking or having conversations (mean = 3.54), and fighting over objects (mean = 3.33). The following behaviors that were reported least often were: threats (mean = 2.41), conflicts where the problem never gets worked out (mean = 2.43), sharing worries or concerns (mean = 2.51), and competition (mean = 2.79).

After mothers indicated the frequency of behavior in the sibling relationship, they then commented on how much of a problem they viewed the behavior. Mothers indicated the top problems as: arguments (mean = 2.48), anger or hostility (mean = 2.44), trying to control each other’s behavior (mean = 2.40), and fighting over objects (mean = 2.29). The areas of least concern of being a problem were: loyalty or sticking up for one another (mean = 1.47), teaching each other (mean = 1.47), protectiveness/looking out for the other’s welfare (mean = 1.53), and talking or having conversations (mean = 1.53). Overall, mothers expressed that they wanted the most help with anger or hostility (mean = 2.18), arguments (mean = 2.03), physical aggression (mean = 1.98), and trying to control each other’s behavior (mean = 1.96).

#### Open-Ended Items

At the end of the survey, there were two optional open-ended questions. These items were designed to capture any additional information the participants wished to share. Respondents could speak freely about their own experiences and give a more personal voice on being a parent of a child who has ADHD. From a qualitative

standpoint, several themes emerged that were consistent with the quantitative findings. The first theme was the frustration and difficulty in raising children with ADHD. Mothers expressed feelings of stress and being overwhelmed with parental demands that seemed more taxing in raising children with ADHD. Another theme that developed was the need for help and support. Parents voiced their desire for help from the community, schools, and their own families. Branching off from this theme was the next theme: lack of understanding of ADHD by schools and/or the community. Here, parents were very emphatic about their desire in having others understand not only the basis of ADHD, but also the unique parental demands as well as strategies for working with children with ADHD. For the next theme, a number of parents identified as having ADHD as well, and discussed the implications that it might have in parenting skills. Finally, the last theme that emerged was family issues. Parents commented on the impact that raising a child with ADHD has on marital and sibling relationships. Listed below are selected excerpts of what parents had to say, organized by each theme.

#### Frustration/Difficulty

- Parenting an ADHD child can be so physically and mentally taxing. I have had so many days where I wonder if it's just me (am I just not cut out for parenthood? I should have more energy at age 28?!). I often wonder what it would be like to parent without ADHD in the family.
- Parenting is stressful and wonderful! I find the most difficult times for me are when I have time restrictions that I need to follow and my children aren't on that same timeline to get things done, or if I am too stressed to deal with my children in a rational manner. Anyone can use parenting support versus criticism that's most often received.
- I'm often overwhelmed and feel like I'm a prisoner to the system, to the daycares... He often tries to control the situation around him. It is stressful. I love him more than life, and it hurts me to think that others don't appreciate his gifts.
- It is very difficult to manage my son's behavior. I often don't know if I am doing the right thing or what else I can do for him. I often feel like a failure to him. Life in our home has been challenging and my son's behavior has impacted his little sister. She imitates his negative behavior a lot.

- Life is never boring; although, sometimes I believe it is more stressful to complete simple tasks having a child with ADHD.
- Some days can be extremely hard when you think, why me??? Then other days he really tries hard and I feel overwhelmed with emotions.
- I find myself very frustrated at times, and disliking the way my son acts. I find myself comparing my son and daughter, and wishing that my son could just be "normal" like her. I just worry that we are not doing enough for him. I have thought about medication, but am really resistant to put him on it.
- I do sit and cry a lot, feeling awful for my son. It's not his fault. It is just something else life throws at you.
- When I answered your questions on whether I would have children if I could do it all over again. I simply stated I may not because I see how ostracized my daughter feels at times and it's very heartbreaking. When she states, "Mom, I wish I could be normal like other children," it's gut-wrenching! I absolutely love and adore her and I have to rely on God in Heaven to see us through! It is very time consuming and difficult at times to parent a child with ADHD.

#### Need for Help/Support

- I think it's been like having a kid with cancer on a chronic basis, except you don't get the support. When my older son got a virus and was hospitalized only to then not be able to walk and remained in intensive rehab in an adjoining state for 5 weeks, neighbors made dinners and family called. As difficult as that time was, our life has been far more difficult for and with our child with ADHD, and there's no dinners and hardly any support.
- I wish there were more parent support groups for children with ADHD.
- As a caregiver, it is important to find a support group or have family and or friends to share with, who can offer suggestions for alternate ways of dealing with the out of control child that are no longer working. Having alternative options is as important as remaining calm. I do not like that I have to tell the other child to "disappear" when the other child is out of control, but for his safety I have to, although he does not understand why he has to go to his room or cannot have my attention. I wish there was a guide that caregivers could go to, that would

offer health suggestions for a multitude of situations (and at the same time all the situations are basically the same as chaos takes over).

- There isn't nearly enough help and support out there for children and families dealing with this disorder.
- It is a very hard life, especially as a single parent. You need someone to share these things with and it can be difficult to ever feel that you are getting ahead in life.
- My husband and I feel very alone. Neighbors, friends, and some family do not understand that children with ADHD are often very bright and do not intentionally "annoy" or "exacerbate" those around them. We wish more could be done to educate society and advocate for these children/adults.
- I wish the stigma would go away and that families could receive both the professional - and even more importantly, the family and community - support that would enable them to not feel so bad, and be able to meet their needs better. I thank God for the therapists that have helped us on this journey, but they need much better training in telling families about community resources.

#### Lack of Understanding of ADHD by Schools/Community

- It is the most stressful experience I could ever have imagined and it is doubly so, due to the fact that there is still so much misunderstanding about the nature of the disorder and the invisible ways it can impact family and social life.
- I feel that schools and staff do not truly understand ADHD and even though there is so much information available, they still believe that ADHD behavior is all choice. Their reactions and choice of behavior modifications for ADHD children affect those kids self-esteem in very negative ways.
- It's been my experience that most public school teachers, administrators and other personnel are extremely unprepared, misinformed and lack proper knowledge and understanding of how to deal with students who have severe forms of ADHD. It's a serious problem in the public schools. Many students' needs are not properly being met.
- A LOT of people still believe that this disorder is a lack of proper parenting. More needs to be done to educate the public that this disorder is real and exists.



- I have been surprised to discover that many teachers in my children's lives have lacked understanding (or just have not cared) about ADHD and methods to help these children learn (and cope) most efficiently. Of course, there have also been teachers I consider heroes in my children's educational lives who have bent over backwards to do whatever was necessary to help them achieve to their fullest potentials. I have been sure to make my appreciation known to those teachers and their administrators.
- It would be nice if other people really understood ADHD, also, instead of looking at it as "child lacking parental discipline" problem. I'm so sick of parents of ADHD kids being blamed--or the kids being looked as "bad kids."
- I feel that too often the school system pushes medication as the only answer. Once my daughter was put on medication the specialist was out of the picture and the primary care physician writes for my daughters prescriptions. What about family and home issues and what could help in those situations?
- I just wish that more people were educated, like the general population about ADHD. I'm so tired of everyone thinking they know about ADHD, that any kid that is "hyper" may have it and that medications for these kids are "bad" they make kids into zombies and that parents just aren't tough enough on these kids and that teachers just want any kids that don't behave on medication. People that are not affected directly by this are quick to say that there are so many kids on meds these days, not like it was back in "my" day, where a good spanking did the trick. These people have no idea. There is so much advertisement and information out there on autism these days, but still so little on ADHD, and still so little tolerance of children's behavior in places like church, restaurants etc. Sometimes I just want to scream at people who keep turning around and giving me dirty looks because my child is acting up or misbehaving. Maybe one day I will. :-)
- I am often hesitant to tell people that my children and I are ADD because it has such a negative connotation to the uninducted.
- ADHD is still not mentioned by most teachers to parents who need this information because of the potential backlash from the parents and/or school administrators. The school systems buy into this ignorance and discourage

teachers from informing parents when they suspect a child is suffering from this condition. I have taught for 28 years. Even before I had my own ADHD children, it was obvious to me that children who have this condition (as well as any other learning/behavioral differences) required different approaches to being taught. I have always considered that as part of my job. I was surprised when I discovered that all teachers did not react in the same way. Many doctors also have limited understanding of ADHD. My nephew's pediatrician wanted to "try him without medication" for a few weeks just to see how he would do...as if his ADHD had magically disappeared.

### Parents with ADHD Themselves

- I have A.D.D. inattentive type as well. This makes parenting 3 children very difficult for me. I did not get diagnosed until after I had 3 children.
- I have been diagnosed with ADHD - inattentive type also this year and am now also taking medication. I sometimes wonder if our family and children's problems are exacerbated more by my parenting and lifestyle choices than their disabilities.
- Although I love all of my children immensely I often feel if I had known about my own A.D.D. sooner, I probably would not have decided to have 3 children. I would have stopped at 1 or 2.
- My wife experiences many of the same symptoms, which add greatly to the stress due to its creating an inconsistent, overly permissive environment, and lack of general follow-through.

### Family Issues

- I feel that my children don't get along mostly due to my son's ADHD. He cannot control himself and ruins my daughter's things and bugs her just to get attention. She resents him because he is always so crazy and causing problems. She is the one who is usually asked to give in just so my son will stop freaking out about whatever he happens to be freaking out about. Medication has helped immensely but unfortunately, the times that they interact the most are evenings when his medication has worn off.
- I believe that there needs to be more help for parents and siblings of children

with ADHD and other disorders. There is plenty of help for the children, but not much for the families. It is just as hard for the family to cope as it is for the child to cope. Therapists and doctors also need to take the other children into consideration when working with the child. Parents cannot always change everything in their lives for one child (or two children in my case). Methods need to be used that are feasible and useful to the entire family.

- I also find it very stressful for my wonderful child who does not have ADHD. She is only three but finding the balance between these two girls can be very stressful. I want both my children to feel loved and nurtured.
- I was a single parent for 10 years. During that time the sibling relationship was vital, but it did alter the family dynamics. My daughter, who is older and has less issues, took part of the parenting responsibility on herself trying to be the peacemaker and assist me in dealing with my son's explosive, angry, moody episodes. Then when I remarried she felt entirely displaced. My stepson, who does not live with us full-time, has had an extremely hard time adjusting to my son's special needs. Since he hasn't grown up knowing how ADHD can affect others, he has little patience or understanding for the symptoms, unlike my daughter.
- My younger 2 children get along much better by themselves, than when the oldest (child who has ADHD) is around. Everyone in the house gets along better when my oldest child is not around.
- It's hard to know where to turn for help implementing changes in the way we relate to each other. Research on symptoms and treatments are abundant, but my family needs help navigating the way we treat and interact with one another. I love my kids, and even though I want to "wring their necks" (sometimes nightly), there isn't anything in the world that I wouldn't do to give them a happier, healthier, more abundant life!
- It's not easy or fun to raise ADHD and ADD children. It takes toll on your marriage and other relationships.
- My son has a pretty strong case of ADHD (as does my husband) and the intensity of emotions is high in our family and I often feel that my daughter really

struggles with how to deal with that. We have used a therapist who specializes in behavior techniques that helps my daughter employ different strategies to extricate herself from my son's intense emotions but I worry about the cost to her. It is hard for me to watch and I often find myself becoming extremely frustrated with both of them because they won't get along. After a long day, I often fantasize about sending my son to boarding school (I wouldn't send him!) or I count the years till he goes to college because I feel overwhelmed. I have found that our social life has been restricted by ADHD and I am saddened by that.

### Summary

This final section offers a summary of the findings of the analysis of the research question for this study. This information has been included in Table 5. For the research question,  $\beta$  coefficients for the model, R square, and significance levels have been provided.

Table 5

#### *Summary of Analysis for Research Question*

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<u>Research Question #1</u>	<u>Findings</u>
Final Model	Accepted
Can parenting daily hassles (A), in conjunction with family coping and sibling warmth (B's), along with parenting stress and sense of coherence (C's) be integrated to predict quality of life (X) in mothers of children who have ADHD?	
Parenting Daily Hassles to Family Coping	$\beta = -.13$
Parenting Daily Hassles to Parenting Stress	$\beta = .42^*$
Parenting Daily Hassles to Sibling Warmth	$\beta = -.18$
Parenting Daily Hassles to Sense of Coherence	$\beta = -.26^*$
Family Coping to Parenting Stress	$\beta = -.19^*$
Family Coping to Sense of Coherence	$\beta = .18$

Table 5

*Summary of Analysis for Research Question (continued)*

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Family Coping to Quality of Life	$\beta = .14$
Sibling Warmth to Parenting Stress	$\beta = -.20^*$
Sibling Warmth to Sense of Coherence	$\beta = -.22^*$
Parenting Stress to Quality of Life	$\beta = -.22^*$
Sense of Coherence to Quality of Life	$\beta = .23^*$
$R^2 = .193$	$*p \leq .05$

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## CHAPTER FIVE

### DISCUSSION

#### Purpose of the Study

The purpose of this study was to investigate the influence that parenting daily hassles has on quality of life in mothers of children who have ADHD, as mediated by family coping, sibling warmth, parenting stress, and sense of coherence. Path analysis was used to provide a framework for explaining the influence of parenting daily hassles, family coping, sibling warmth, and parenting stress in the model on quality of life. This chapter summarizes the pertinent findings and offers implications for theory, research, and practice. Finally, conclusions are drawn on this area of study.

#### Summary of the Study

A survey research design was employed in order to collect data regarding parenting daily hassles, family coping, sibling warmth, parenting stress, sense of coherence, and quality of life. These data were used to test the hypothetical model for predicting quality of life in mothers of children who have ADHD. The model was based on the ABC-X model from the family stress framework (Hill, 1949). Specifically, this model analyzed the influence of stressor events (parenting daily hassles), coping factors (family coping and sibling warmth), and appraisal factors (parenting stress and sense of coherence) on level of adaptation or crisis (quality of life) in mothers of children who have ADHD.

Participants were recruited from support groups for parents of children who have ADHD. Participants were also secured from practitioners who work with children who have ADHD. Announcements about the survey were made through email, websites, online discussion boards, and newsletters. Parents were eligible to fill out the survey if they had at least two children residing in the household under the age of 18. One of their children must have been diagnosed with ADHD. The total sample consisted of 114 parents, of which 103 were mothers and 11 were fathers.

Parents were asked to complete an anonymous online questionnaire. The questionnaire consisted of 15 demographic items, plus 2 open-ended questions. The remainder of the survey was made up of 135 items taken from six scales used to

measure the variables of interest in the study. Of the 135 items, 68 questions required multiple responses pertaining to different dimensions of the same characteristic (e.g., frequency and intensity of the same characteristic). The variables and their corresponding scales were the Parenting Daily Hassles Scale to measure parenting daily hassles, Family Crisis Oriented Personal Evaluation Scale to assess level of family coping, the Parental Expectations and Perceptions of Children's Sibling Relationships Questionnaire to measure sibling warmth, the Parental Stress Scale to assess parenting stress, the Orientation to Life Scale to measure sense of coherence, and the Satisfaction with Life Scale to determine quality of life.

In order to guide the process of investigating the variables of interest, two underlying conceptual frameworks were integrated to study the family and stress factors. Family stress theory identified possible variables that may account for the differences among families as they adjust and adapt to life stressors (Crosbie-Burnett, 1989). The ABC-X model from family stress theory (Hill, 1949) was used to analyze the influences of stress factors, coping factors, and appraisal factors on levels of adaptation. Family ecology theory stressed the importance of understanding development of the family and the individual through relationships with each other, with other persons, and with other systems. Thus, including a study of particular relationships within the family was thought to shed light on areas in family adaptation that may otherwise not be recognized.

These two theories were integrated in order to capture stress within the context of family relationships. Specifically, warmth in the sibling relationship was proposed as an additional coping resource for families. Based upon prior research and an integration of family stress theory and family ecology theory, this study examined the influence of stressor events (parenting daily hassles), coping factors (family coping and sibling warmth), and appraisal factors (parenting stress and sense of coherence) on level of adaptation or crisis (quality of life) in mothers of children who have ADHD. Overall, families were projected to adjust to changes in stressor events, coping factors, and appraisal factors, in order to experience adaptation or crisis in parenting situations and in the quality of their lives.

One research question was used in this study to assess the predictability of the

model in determining quality of life. The research question was stated as follows: Can parenting daily hassles (A), in conjunction with family coping and sibling warmth (B's), along with parenting stress and sense of coherence (C's) be integrated to predict quality of life (X) in mothers of children who have ADHD? ( $A_M + B_M + C_M \rightarrow X_M$ )? The research question was tested through the use of path analysis of a model in order to assess the influence of the predictor variables within the model. Specifically, this study explored how well parenting daily hassles, family coping, sibling warmth, parenting stress, and sense of coherence could predict quality of life outcomes in mothers of children who have ADHD.

The conclusion, as indicated from goodness-of-fit indices, was that the hypothesized model was acceptable and provided a good fit in explaining the influence of the selected variables on quality of life. The variables predicting quality of life were parenting daily hassles, family coping levels, parenting stress, and sense of coherence. Sense of coherence had the strongest total effect on quality of life. Although family coping was found to be significantly correlated with quality of life, family coping did not have a significant direct predictive factor in determining quality of life. Parenting stress mediated the relationship between level of family coping and quality of life. Additionally, parenting stress also mediated the relationship that parenting daily hassles had with quality of life. Sibling warmth had no direct relationship to quality of life. However, there was a relationship between parenting stress and sense of coherence with sibling warmth. Thus, sibling warmth was indirectly related to quality of life, as mediated by parenting stress and sense of coherence. The intensity of parenting daily hassles was also found to be significantly correlated with parenting stress. This model explained 19% of the variance in quality of life.

### Discussion of the Findings

#### Discussion of Methodology

In conducting this research, surveys were disseminated through an online link posted via email, discussion boards, online newsletters, and websites. Participants were recruited from parenting support groups and a practitioner that provided psychological services to children and families. In comparison, previous researchers who conducted studies with families and siblings of children who have ADHD identified participants



through clinics, pediatric offices, and schools, and used face-to-face interview and survey techniques rather than online data collection (Fussell, Macias, & Saylor, 2005; Jones et al., 2006; Kendall, 1999; Mash & Johnson, 1983b). The age range of the children of the parents in these prior studies tended to be narrower and representative of early childhood, whereas the current study included parents of both young children as well as adolescents.

The researcher found that the method of sampling in the present study resulted in a low return rate relative to the desired number of completed surveys. Although it is unknown how many potential participants were reached, that number could have been greater by the recruitment of parents through schools and additional practitioner offices and clinics. The difficult nature of gaining access to local school systems provided a barrier in access to additional parents. Due to the confidentiality of records, school systems and practitioner offices may be less inclined to allow researchers to gain access to their population without a connection or prior relationship established. This lack of a prior relationship also made it difficult to gain access to certain parenting support groups. In addition, these groups, school systems, and practitioners may have been more open to the research if it aligned better with their own research interests and practice focuses.

The recruitment of fathers for participation in this study proved to be a difficult task. Only 11 fathers completed the survey. As such, the researcher was unable to compare mothers and fathers. The study was therefore limited to analyzing the goodness of fit of the model for mothers only. Comparing the two groups would have made for a more rich study, and would have given insight into differences or similarities on how mothers and fathers dealt with parenting and stress. Many fathers in this study were employed full-time, and thus had both family and workplace stressors to face. In the majority of families surveyed, the mother was the primary caretaker, and was more involved in daily activities with the children. Fathers spent a considerable amount of time outside of the home, earning money to support the family. Therefore, mothers in the primary caretaker role may be more likely to respond to the survey than fathers.

The online format of the survey provided both positive aspects toward participant recruitment, as well as drawbacks. Utilizing an online survey allowed participants to

complete the survey within the comfort of their own homes and on their own schedules. Time management is always a challenge for families, and in particular families of children with ADHD (Gevir, Goldstand, Weintraub, & Parush, 2006). Thus, the online format allowed parents to complete the survey at a time and location that was convenient to them. Unfortunately, for many parents, there may have not been any time that was convenient for them. Parenting demands, in addition to other demands outside the home such as employment, may have created a situation where the parents simply had no time to fill out a survey. That sentiment was reiterated by one leader of a parenting support group.

A drawback of administering a survey online was the impersonal nature of the conduction of the survey. By not meeting with group leaders and participants face-to-face, the researcher may have not been able to establish a personal connection with them. Therefore, participants may have not been able to assess the need for the research or the usefulness in their participation. An increase in the monetary incentive or a wider distribution of incentives to more participants may have helped to increase the response rate. However, due to the limited amount of funding, the researcher was not able to offer increased incentives.

Self-selection bias was another limitation of online surveys (Witmer, Colman, & Katzman, 1999). Certain individuals were more likely to respond to an invitation to participate in an online survey, with those being most active in the online community more likely to respond (Thompson, Surface, Martin, & Sanders, 2003). Those who are most active may possess characteristics that distinguish themselves from individuals who read the information infrequently or who only “lurk” on discussion boards and websites. However, these biases also exist in mailed surveys. Parents who were more active in face-to-face support groups or who seek out services for their child may have been different from those parents who do not obtain services. However, those particular parents proved to be the most difficult to identify, as they are not connected to a group from which the researcher could have recruited.

Another limitation of this study was participant attrition. A total of 265 people attempted the survey. However, 151 people never finished the survey. It was anticipated that the online format may have made it easier to exit from the survey with a

simple click of the mouse. Administering a survey in-person may make people feel more obligated to complete the entire survey with the presence of a survey administrator.

The length of survey was also a likely factor in participants fully completing the survey (Ellis, 1998). The estimated time to complete the survey was 25 to 35 minutes. Adding the distractions that may have occurred from the children of the household, the survey may have taken parents even longer to complete. Parental demands may have kept respondents from completing the survey. Furthermore, for certain parents who also have ADHD, their own distractibility may have contributed to the lack of completion of the survey.

The loss of participants seemed to happen more often in sections of the survey that included questions that required them to rate multiple dimensions. For instance, on each area of the sibling relationship, respondents were asked to rate the frequency, degree of problem, ease of handling, and how much help they wanted. There were multiple drop boxes for each of these questions. This feature may have caused participants to feel overwhelmed by all of the information on one screen. Perhaps these types of questions are better communicated in a paper format. The inclusion of fewer dimensions may have increased the readability and understanding of these questions.

Finally, the research was based on parental reports. Whereas this reliance may be useful for collecting information on parenting stress and personal variables, it may not be reflective of the multifaceted dynamics of the sibling relationship. Input directly from the children about the sibling relationship may have added to the knowledge of sibling warmth and may have identified other areas for further exploration in future research.

### Discussion of the Research Question

In this study, one research question was examined: Can parenting daily hassles (A), in conjunction with family coping and sibling warmth (B's), along with parenting stress and sense of coherence (C's) be integrated to predict quality of life (X) in mothers of children who have ADHD? ( $A_M + B_M + C_M \rightarrow X_M$ ). A path analysis was conducted to answer the research question. Goodness of fit indices indicated the data fit well with the model.

The variables in this model accounted for 19% of the variance in quality of life

scores for mothers of children who have ADHD. Quality of life is a very complex variable, as it is a global measure and is affected by all domains of an individual's life (Diener, 1984). Many things contribute to and affect quality of life, including life enhancing factors as well as stressors, and the comparison of those circumstances to their personal standards (Pavot & Diener, 1993). Researchers have yet to identify all of the different factors and their cumulative impact on predicting quality of life in parents of children who have ADHD. The model may have accounted for less variability due to the multitude of experiences that these parents face that contribute to overall quality of life. With the number of complexities and uncertainties in these parent's lives, this model still provided both parents and practitioners a starting point on what areas to develop and attempt to gain further control.

For mothers of children who have ADHD, significant direct relationships were observed for parenting stress and sense of coherence on quality of life. Parenting stress also mediated the relationship between family coping, sibling warmth, and parenting daily hassles with quality of life. Sense of coherence mediated the relationship between parenting daily hassles and sibling warmth and quality of life, but had no significant mediating relationship between family coping and quality of life. Interestingly, mothers who reported a higher sense of coherence indicated a lower level of sibling warmth. Perhaps mothers who felt they possessed the ability to handle and manage their situation did not need to rely upon sibling warmth to supplant their definition of having a higher quality of life. Parents with a high sense of coherence may have been able to manage life events regardless of the presence of sibling warmth.

Sense of coherence had the greatest total effect on quality of life. A low sense of coherence may be an indication of the pervasive impact ADHD has on parents. As reflected in the responses to the open-ended questions, the frequent frustration and anxiety that some parents experienced may have parents questioning their competence and capability to manage demands. In turn, lower levels of sense of coherence may influence the ability to effectively cope with not only the stresses related to caring for a child with a disability, but also stressful life events as well (Oelofsen & Richardson, 2006). Parents with a weak sense of coherence may experience diminished coping abilities and thus may perceive the world as more stressful. Parents with a higher sense

of coherence tend to use more effective coping strategies (Cohen & Dekel, 2000) and experience lower perceived stress (Hedov et al., 2002; Mak et al., 2007). Sense of coherence can be viewed as a reciprocal variable, in that continued lack of success in handling life events and stressors may contribute to a lower sense of coherence. Then, a lower sense of coherence affects parents' confidence to manage future events, which may lead parents to assume that they will fail or be unable to have control over life situations. This build up of frustrating experiences over time may contribute to overall feelings of a lower quality of life. Parents with a high sense of coherence may focus on things in their lives that they can have control over, and actively assess their lives as something they can manage. Therefore, when measuring their own quality of life, they may see their own satisfaction as being attainable.

Family coping had the second greatest total effect on quality of life. However, family coping seemed to fall short on having significant direct paths within the predictive model with any variable except for parenting stress. Quality of life and parenting stress were the only two variables with which family coping had a significant relationship in the correlation analysis. When parents experienced increased stress, their level of family coping decreased, as they employed a lesser amount and variety of family coping strategies. This finding was consistent with earlier research on stress and utilization of coping resources (e.g., Crnic et al., 1983; Hadadian, 1994). When trying to manage the multiple stressors and ongoing events that are associated with parenting children who have ADHD, parents might feel overwhelmed with all of these demands and not be able to problem solve or cope with stressors in a productive way. They may be hesitant to reach out for assistance from their extended families, as they do not want to be perceived as placing a burden on other family members (Grant & Whittell, 2000). These families may be more susceptible to negative outcomes in their attempts to resolve the stressful situations, and these outcomes may shape future coping responses. The continued high levels of stress and negative successes may contribute to a sense of defeat and passivity in their coping styles (Bramlett et al., 1995).

Parenting stress had the third greatest total effect on quality of life. Parental perception of stress influences the process of parenting children both with and without disabilities (Boss, 2002; Rodriguez & Murphy, 1997). Parental stress can come from

many sources. The cumulative effect of minor life events, such as daily parenting hassles, may be a significant source of parenting stress, as they represent ongoing and unending demands (Crnic & Greenberg, 1990). As such, parenting stress mediated the relationship between parenting daily hassles and quality of life. The relationship between parenting daily hassles and parenting stress also had the highest correlation in this study. Specifically related to parenting children with ADHD, parents may also have increased daily hassles due to the unpredictability of the child's needs (Dyson, 1997). Children with ADHD require more frequent interventions from parents than children without disabilities, as their behavior contributes not only to an increase of demands, but also an increase in the intensity of such demands. Parents are seemingly more adept at handling frequent, typical behaviors of children, but experience higher levels of frustration around more complicated and intense issues. Overall, as the intensity of the parenting daily hassles increased, parenting stress also rose.

Although sibling conflict was not included as an original variable in the model, correlations were run to determine if there were any significant relationships with the other variables (see Table 3). Sibling conflict was significantly correlated with more of the variables than sibling warmth. While sibling warmth was only significantly correlated with parenting stress, sibling conflict had a significant relationship with parenting stress, parenting daily hassles, and quality of life. This study focused on sibling warmth rather than sibling conflict, because the aim was to look at positive protective factors rather than negative risk factors. However, sibling conflict was more meaningful as a variable contributing to stress adaptation and quality of life. Perhaps sibling warmth is what families take for granted when things are running smoothly, as energy and focus are diverted into behavioral issues that demand the parents' immediate attention. Sibling warmth, when present, contributes to the maintenance of relationships. Warm sibling relationships play an important role not only in the development of social competence, but also in a child's ability to adequately deal with conflict (Herrera & Dunn, 1997; Howe, 1991; Lockwood, Kitzmann, & Cohen, 2001).

The absence of sibling warmth may not necessarily increase conflict in the sibling relationship. As demonstrated in this study, as well as others (e.g., Furman & Buhrmester, 1985), sibling warmth and conflict were not shown to be correlated with

each other. Siblings may simply be indifferent to each other and choose to avoid interactions when possible, or they may choose to fight regularly. Conflict has a more noticeable presence in the household, especially if the conflict is frequent and intense. High levels of sibling conflict were also associated with an increased likelihood of having poor relationships outside of the family, including relationships with schools and peers (McCoy, Brody, & Stoneman, 1994). Therefore, conflict may be more likely to cause a disturbance in daily routines within the household, and may serve as an additive source of further stress when that conflict spills over into peer and school relations.

### Related Findings

A breakdown of responses to certain variables was performed on pertinent subscales. Responses were rank ordered to determine the most commonly used coping strategies, sense of coherence components, and the most frequent daily hassles of parents. In addition, the sibling relationship subscales of warmth and conflict were explored in order to identify top areas of concern. While the deconstruction of sense of coherence domains did not reveal any significant differences in the utilization of the three core components, an analysis of the other variables did produce distinguishable areas of parental concern.

In the current study, mothers were most likely to utilize passive appraisal coping styles. These findings confirmed the work of past researchers, in that parents with high levels of stress were more likely to respond with passivity (Barnett et al., 1990; Bramlett et al., 1995). The reliance of passive appraisal has been linked to more negative family adjustment (Lustig, 2002; McCubbin et al., 2001). The mothers in this study were also more likely to rely on internal coping methods than external coping strategies, consistent with the findings of Orfus and Howe (2008). They were less inclined to acquire social support as a means for coping strategies. Mothers of children who have ADHD may feel that they should manage and cope with stressors individually rather than share their family issues and seek outside sources of support. Furthermore, past negative experiences of relying on outside support may cause mothers to be less likely to seek support outside of the family in the future. As supported by the responses to the open-ended questions, parents felt a lack of understanding in school and community settings, as well as strained relationships between neighbors, friends, and extended

family due to the increased behavioral and attention needs their children possess. Ineffective coping strategies may further alienate sources of support (Willis et al., 1996). In addition to social support challenges, parents may have not experienced success in receiving effective professional support, either through professionals who are not adequately trained in ADHD treatment and management, or through resource transience and attrition (Hornby, 1992). The turnover rate of mental health case managers may be high in some locales or agencies. These negative experiences may build into a general notion of distrust and lack of confidence in the ability of outside sources of support to assist the family.

Parenting daily hassles were rank ordered to determine which hassles parents reported as occurring most frequently and which hassles were most intense. Both “continually cleaning up messes of toys and food” and “being ragged, whined at, and complained to” were among the most frequently occurring hassles as well as the biggest hassles in intensity. Not only did these hassles occur often, but also parents felt worn out by constantly dealing with these issues. Although parents listed their children’s not listening as something that happened with greater frequency than other hassles, parents did not feel this hassle presented a large degree of intensity. Thus, parents either accepted their children’s not listening as a normal part of the parent-child relationship, or possessed skills to be able to manage and direct their children in this task. Sibling arguments were not reported as something that occurred frequently. However, parents indicated that when arguments did happen, they were perceived as one of the top parenting hassles. The difficulty in dealing with sibling arguments and conflict was confirmed by prior research on the sibling relationship in families of children who have ADHD (Jones et al., 2006; Kendall, 1999; Mikami & Pfiffner, 2008). The presence of ADHD seemed to intensify the degree of the arguments and complicated the resolution of those conflicts.

A rank ordering of the frequency of behaviors in the sibling relationship revealed what aspects may be most important for parents and practitioners to focus on when helping families build healthy relationships. Areas of conflict in the sibling relationship were more commonly reported as taking place most frequently over areas of warmth and rivalry. As such, sibling conflict has been associated with elevating levels of



parenting stress (Patterson, 1986). Conflict in the sibling relationship also spills over into the parent-child relationship. Specifically, the conflict over how siblings get along is a primary source of parent-child conflict (McHale & Crouter, 2003). Teaching children strategies on how to constructively deal with conflict would help not only in improving sibling relationships, but also in helping children apply newly gained skills of conflict resolution to peer and parental relationships.

The control over the other sibling's behavior was the area that parents rated as "occurring most frequently," and also ranked as one of the top problematic areas for which they wanted assistance. Sibling arguments came up consistently as one of the most frequently occurring behaviors, one in which parents viewed as being the "most problematic" in the relationship, and one of the top areas in which they wanted help. Anger and hostility were also top areas of concern for parents, as they were viewed as being not only one of the bigger problems in the sibling relationship, but also an area that parents expressed wanting help in learning effective ways to deal with the behavior. However, while parents viewed anger and hostility as being problematic and requested the desire for more skills in managing this behavior, they did not indicate anger and hostility as occurring often in the sibling relationship. Whereas these behaviors might occur with less frequency, when anger and hostility do arise, the behaviors tend to be more intense. These behaviors may be more psychologically draining and more taxing on parental competence and well being than the behaviors that occur with greater frequency, but less intensity. Parents can help siblings by providing alternative strategies for handling anger and teaching social skills for resolving arguments (Updegraff, Thayer, Whiteman, Denning, & McHale, 2005).

### Open-Ended Questions

The open-ended questions at the end of the survey consisted of two optional questions asking parents for additional experiences, thoughts, and feelings that they wished to share. The major themes were presented, along with selected examples within each theme, in Chapter 4. The major themes were: frustration/difficulty in raising children who have ADHD, need for help/support, lack of understanding of ADHD by schools and the community, parents with ADHD themselves, and family issues. These thematic topics seemed to verify the information provided by the quantitative data, as

well as support previous research findings of role dissatisfaction and lower parenting self-esteem and confidence (Johnston, 1996; Kadesjo et al., 2002; Mash & Johnston, 1983a; Podolski & Nigg, 2001). Within the present study, parents were seeking support in the form of outside resources and coping strategies, as well as requesting more understanding from individuals and systems that interact with their families. Parents particularly felt a lack of social support from their immediate environments as well as their communities. The findings in the present study reflected the feelings of social isolation that parents had in previous studies (Barkley, 1998; Breen & Barkley, 1988; Cunningham et al., 1988; Mash & Johnston, 1983a).

Some parents expressed frustration in the parenting daily hassles of raising their children, whereas other parents voiced the need for support in the form of parenting groups and ADHD management strategies. The possession of these resources, support, and parenting strategies may help to boost a parent's ability to handle events, and in turn contribute to a greater sense of coherence (Olsson & Hwang, 2008). The suggestions that parents gave seemed to be linked to the hope that attaining these wishes may bring a better quality of life and ease the stressors that they face.

Of particular interest was the group of parents who expressed concerns in managing not only their child's ADHD, but also their own ADHD symptomatology. In the United States, forty percent of children who have ADHD have at least one parent who also meets the criteria for ADHD (Zeigler Dendy, 2000). Sometimes, parents may have been children whose ADHD symptomatology went undiagnosed. Parents may have realized that the symptoms they see in their own children are the same behaviors they had been demonstrating since their own childhood. These parents were not only trying to manage their children's behavior, but they were also trying to do so in the context of their own struggles with ADHD. Because treatments for children who have ADHD rely heavily on parental support, disabilities in the parents can interfere with the child's treatment (Chronis et al., 2003). This particular group of parents faces additional challenges in parenting and may experience increased stress as a result of trying to accommodate their needs alongside their children's needs.

#### Implications for Theory, Research, and Professional Practice

The current study has provided data that added to the knowledge base on

parenting stress in families of children who have ADHD. The results of this study indicated that further examination is needed for understanding how parents of children with ADHD cope with stressful life events. The findings provided sufficient information to offer recommendations for areas to address in theory, future research, and professional practice.

### Implications for Theory

This study provided an example of the practical use of Hill's (1949) ABC-X model of family stress. The utility of this model lies in the ability to identify variables, conduct path modeling, and provide a basis for the predictive analysis for this study. In addition, the parsimonious nature of the model allows researchers to test multiple variables for each of the four components of the model. This study provided a case for the continued use of this model for determining predictor variables related to stress and quality of life outcomes.

Family coping only had a direct relationship with one variable, which was parenting stress. While parenting stress helped to mediate the relationship between family coping and quality of life, family coping strategies seemed to fall short of directly influencing the other variables. In particular, family coping did not have a direct relationship with parenting daily hassles, sense of coherence, and quality of life. As these variables reflect more individual perceptions, perhaps the model should have incorporated an analysis of individual coping skills rather than family coping strategies. Furthermore, family stress theory may have more value if reciprocal paths among the model variables existed (Patterson & Garwick, 2004). Thus, the interaction between constructs within the same domain, such as sibling warmth and family coping, could be more extensively explored to compare the value of resources in helping parents adapt to stressful situations.

Of note in this particular study was the importance the appraisal variables with the model of parenting stress. Both parenting stress and sense of coherence had significant direct relationships with quality of life. These variables also mediated the relationship between sibling warmth and quality of life. Whereas some theories focus on resources and relationships in family development, family stress theory includes appraisal factors that demonstrate how individuals make sense of the world around

them. The parents within this study may feel empowered by having a high sense of coherence, and thus are able to take control over certain aspects of their lives, especially when they have no control over other areas of their lives. Without the study of appraisal factors, it may be difficult to ascertain which parents are better able to adapt when faced with stressors.

In an expansion of family stress theory, the work of Boss (2002) may also be incorporated to form new viewpoints on parenting stress. Specifically, Boss described a type of uncertain loss where individuals might be physically present, but psychologically absent, known as ambiguous loss. People dealing with ambiguous loss hold onto the hope that things may return to the way they used to be. The principle of ambiguous loss has been applied to different family experiences, including parents raising children who have disabilities (e.g., O'Brien, 2007). Parents of children who have ADHD may also experience this ambiguous loss. When facing a constant barrage of stressors, some parents in the study expressed the desire for their children to "sometimes just be normal." Parents may express loss over not having the "perfect" child. These feelings of loss may be further intensified as parents approach significant milestones in their children's lives that may be complicated by ADHD (Bernier, 1990). Parents may respond to their children with ambivalence, shame, or disappointment associated with their ADHD symptomatology, and may be hesitant to reach out for assistance because they do not wish to share those feelings with others. Further exploration of ambiguous loss experienced by these families may add to the knowledge base of family stress theory and provide additional understanding of how parents of children with ADHD define and cope with stress.

From a family ecology perspective, the relationship of the sibling was analyzed in order to discover how system members' interactions related to stress and coping. The variable of sibling warmth was included in the model as a resource for dealing with stressful situations. However, sibling warmth, as one dimension in a complex relationship, failed to have a direct relationship with overall quality of life in parents of children who have ADHD. The inclusion of multiple dimensions of the sibling relationship may have better addressed this component of the microsystem in predicting quality of life. When mediated by parenting stress and sense of coherence, sibling

warmth became a better predictor variable. Thus, the interaction in the mesosystem between siblings and their parents may serve as a better variable for resources in dealing with stress. In addition, other relationships within the system, such as the marital relationship, may also provide further clues on how parents are able to adapt to challenges in raising children who have ADHD.

Overall, family networks and relationships adjust when raising a child who has a disability (Bernier, 1990). These relationships form the basis of the support network for parents. However, the parents in this study were less likely to use their social support system comprised of friends and families, as well as spiritual support through their churches and temples, and more likely to use more internal coping methods. As suggested in the open-ended responses, the access to more external methods of coping may be limited. The lack of availability of these systems to some families may contribute to greater sources of stress and strain, as families have less coping resources to help get them through daily stressors. Thus, this study confirmed the importance of looking at the interaction between families and the systems in which they interact in order to gather a full picture of the context of their development.

#### Implications for Research

As revealed through the experiences of conducting this study, capturing of the viewpoints of fathers has been a challenging task. Fathers were difficult to recruit and sustain through the completion of the survey. Within the literature, the examination of fathers within the context of families of children who have ADHD has been relatively absent. Traditionally, researchers have reported difficulty in accessing fathers for research purposes (Burbach, Fox, & Nicholson, 2004). As fathers are playing an increasing role in the family unit, it is imperative that knowledge is gained in understanding the perspective and experience of the father, as well as the experience of the mother. In addition, the current globalization of the economy has increased the financial demands on the family and has required many families to have income from both parents in order to survive. The role of the father in child rearing has increased in order to balance parental and occupational roles between dual-earning parents (Kaufman & Uhlenberg, 2000). In light of the complexity of today's roles, we need to gain the perspective from both parents. Future research should be directed not only

toward including fathers in ADHD research, but also in research involving other disabilities and life experiences in order to obtain a multitude of perspectives.

Past researchers have well established the higher level of stress in families of children with ADHD (e.g., Anastopoulos et al., 1992; Fischer, 1990; Harrison & Sofronoff, 2002; Mash & Johnston, 1983a). However, few researchers have gone beyond the levels of stress to delve into how coping and appraisal factors affect outcomes. The results of this study suggested that sense of coherence played an important role in how parents of children who have ADHD adapt to stressful situations. Future studies with a larger sample size to form a basis of comparison groups would be beneficial in identifying key factors that distinguish parents who possess a high and low sense of coherence.

Parents in the current study indicated additional struggles in raising children who have ADHD when the parents themselves also were diagnosed with ADHD. These parents may face unique challenges as compared to parents who do not have ADHD. Studying the family functioning of adults who have ADHD may help to identify strategies and support that are most effective in parenting skills, behavior and time management, and coping with stress. Further research on this group can help in outlining effective treatments for both the parent and child. In such cases, research and treatment should involve the whole family, rather than solely the child.

The data on the sibling relationship in this study were derived from parental responses to questionnaire items. In the next stage of research, it may be helpful to gather data directly from the siblings about the relationship. A direct assessment, such as the Sibling Relationship Questionnaire (Furman & Buhrmester, 1985), could provide information about the relationship from the sibling perspective. Whereas the recruitment and retention of child participants brings its own set of challenges, hearing directly from the children may reveal information that the parents may not know about or choose to ignore. For instance, siblings may put more or less weight on conflicts in the relationship as compared to parental reports. A comparison between parental reports and data directly from siblings may reveal such discrepancies, and provide an impetus for future studies.

The focus of this study was on resiliency factors, such as sibling warmth, and

their positive contribution as resources for coping and managing stress. However, in this particular study, sibling conflict played more of a role in the variance of quality of life than did sibling warmth. Further exploration of conflict in the sibling relationship and its effect on parental stress and quality of life is warranted. Qualitative studies on the sibling relationship may also help to identify possible factors that contribute to the model of successful adaptation to stress.

In addition to sibling conflict, other variables may also be considered in future revisions of the model. The exploration of stressors can be expanded to include major life events in the model. For instance, the level of stress that parents experienced may be influenced by significant life changing experiences, such as marital separation or divorce, the birth of a child, death of a family member, or incarceration of a family member. As stressors can be defined by both everyday experiences, as well as major life events (McGoldrick & Carter, 2003), the 'A' factor of the model could include both of these variables to determine if parents who experienced major life events differ in their management of stress from those parents who have not experienced such events. Also, in light of the current economic situation in the United States, the inclusion of financial variables in the model may be beneficial for understanding family resources and stress. Families that are financially struggling may have increased stressor events, and these events may influence family coping strategies.

Finally, this study should be replicated using different samples. A larger sample size would be beneficial in comparing group differences in stress appraisal and coping styles. Possible groups include: mothers and fathers, children of different developmental age groups, parents of children with different disabilities, and parents from employed and unemployed households. In addition, practitioners may benefit from research that involves parents who received services for their children who have ADHD, as compared to parents who did not receive any services. However, recruitment of parents who did not receive services would be difficult as the majority of recruitment sources are from clinics, practitioner offices, and support groups. As this study featured parents predominantly from White/Caucasian backgrounds, more research needs to be conducted that includes a larger variety of ethnic and cultural backgrounds. Differences in culture and value systems may influence the coping strategies parents may use in

dealing with stress and parenting issues (Li-Tsang, Yau, & Yuen, 2001).

### Implications for Professional Practice

The model used in this study provided a starting point for counselors, psychologists, and other helping professionals to understanding the factors that may contribute to a lower quality of life for parents of children who have ADHD. This study revealed that stress and quality were very complex phenomena. The identified variables in the study accounted for a portion of the variance in quality of life. In order to provide appropriate interventions, helping professionals need to have knowledge and training on what contributes to a person's feelings of stress and what has an impact on the ability to cope and handle parenting demands. Practitioners who possess a comprehensive understanding of the stressors, coping, and appraisal mechanisms discussed within this study may be better able to help these families deal with the daily hassles they face and provide them with the skills to effectively manage the family environment.

As very few fathers responded to this survey, more of an effort needs to take place in reaching out to fathers for support and services. Traditionally, interventions have focused on the child who has ADHD. Family involvement in therapeutic strategies is seemingly secondary to direct interventions with the child. When family members are involved in the therapeutic process, it is mostly the mother who attends these interventions rather than the father (Duhig, Phares, & Birkeland, 2002). Furthermore, the mother is more likely to be involved in educational decisions and parent-teacher communications (Nord, Brimhall, & West, 1997). She is also more commonly associated as the one who gathers information about research and strategies for working with children who have ADHD. In taking a family systems approach, fathers would be a part of therapeutic settings, support groups, and educational matters. In addition, including fathers in the therapeutic process would also open the avenue for discussing the impact of parenting stressors on the marital relationship (Hornby, 1992). However, involving fathers in parent education and support groups may prove to be more of a challenge. Fathers traditionally have been difficult to attract to support groups because historically they have not been present in this type of setting (Burbach, Fox & Nicholson, 2004). Work demands may also further complicate the availability of the father for all of these services. Nevertheless, the options available specifically to support fathers need to



increase in order to support the whole family.

A number of parents voiced concerns over the sibling relationship. In particular, they wondered how having a child with ADHD in a family may impact the relationship between the parent and the child who does not have ADHD. The development of the sibling who does not have ADHD cannot be overlooked or overshadowed by the demands that parents may face in raising a child who has ADHD. Thus, practitioners may look at interventions that also involve the non-disabled sibling. These interventions may be structured as whole-family services, and involve the sibling as part of the input and decision-making process. Practitioners may also identify additional support needs for the siblings that may have otherwise gone unnoticed due to the focus on the child who has ADHD. Individual services may need to be considered for the siblings who do not have ADHD.

The most frequently mentioned concern among the parents of this study was focused on the knowledge and practices of the school system. Parents wanted teachers and school staff to be more informed about ADHD and more knowledgeable about successful strategies in working with children who have ADHD. Among disabilities, ADHD is one of the more common disorders that educators and administrators encounter (Barbaresi et al., 2002). Therefore, specific training for teachers and administrators on classroom interventions and modifications for children who have ADHD would benefit many children and families. Building the relationship between parents and the school staff would be a key component in working together to adequately address the needs of the child.

Overall, many parents expressed their desire for increased availability of support groups for parents of children who have ADHD. In addition to face-to-face groups, the offering of different modalities for support groups may reach out to more parents and accommodate more schedules. Such ventures would go further than online discussion boards that already exist. Online support systems that include parent mentors may provide a more personal means for relating and exchanging information. Popular social networking sites may also be a conduit for gathering parents with these commonalities. Offering support groups in venues which parents frequently access may help decrease barriers for participation by providing a convenient way for parents to join a group before

or after an event that they already attend. Such venues might include churches, temples, community centers, schools, and the workplace. These settings would further increase the visibility of the group and may help the systems the parent interacts with to see the importance of such groups.

### Conclusion

The findings from this study contained many contributions to the field of child and family development. Greater quality of life was related to a higher sense of coherence, lower levels of parenting stress, higher levels of family coping, and less intense parenting daily hassles. The symptoms of ADHD can often leave parents feeling overwhelmed (Kendall et al., 2005). Parents must deal with common demands that occur in all families. These demands might be further complicated when parenting a child who has ADHD. Helping with homework or dealing with peer relations becomes more challenging when that child has ADHD (Coghill et al., 2008). Parents must also try to manage the new demands that are created as a result of raising a child who has ADHD. For instance, parents are faced with seeking out additional services, both at the therapeutic and school level. These parents can be easily overtaxed and exhausted when trying to balance all of the demands and still try to maintain a positive outlook on life. Yet, some parents have confidence in their beliefs that they can manage their life situations despite never-ending challenges.

While sibling warmth did not contribute directly to quality of life, it was related to parenting stress. Higher levels of sibling warmth corresponded with lower levels of parenting stress. The sibling relationship in it of itself may not be a strong predictor of quality of life. However, its impact on other variables can lead to different outcomes for quality of life. Children's interactions with their siblings are linked to their psychosocial adjustment, the quality of the parent-child relationship, and to parental stress (Updegraff et al., 2005). Thus, it is important to explore the sibling relationship as a factor in family development. Whereas sibling warmth may not outline a total picture of family functioning, the addition of sibling conflict as factor in sibling relations may help to discern the overall contribution of the sibling relationship to family stress management and adaptability.

As differences between mothers and fathers could not be calculated with the

data collected, future researchers should reach out to fathers to garner a better picture on how to support the whole family. Fathers are historically underrepresented in research on child and family outcomes. Sometimes fathers are unavailable for research due to work commitments. It was thought that administering the survey in an online format would help to alleviate some of the access issues. However, fathers were still difficult to recruit through those means. In some families, the mother has taken the lead in gaining knowledge and strategies on ADHD. In those families, fathers may defer to mothers in answering questions about the family, and thus may not see the importance of their contribution to this research. To be more successful in involving fathers in these studies, researchers should first focus on building relationships with fathers through community and work collaborations. Interest in the research topic and acceptance of its importance can be cultivated through these relationships.

Parents of the present study voiced the need for support, not only to enhance their coping strategies, but also to make the systems in which they interact be less stressful. Although support groups and intervention programs may help, parents need first to be understood at the school and community level. Teachers, counselors, therapists, and other family support providers need to be educated and trained on effective management and services targeted for the child who has ADHD. In addition, these providers also need training on supportive communication strategies in working with whole family.

Although this study looked at stress levels in parenting children who have ADHD, the resiliency and adaptability that these families demonstrated cannot be overshadowed. These parents needed to possess many resources and strategies to keep their families as a well-run unit. One parent in the study accurately summed up the experiences of being a parent of a child who has ADHD: "It is often difficult, many times frustrating, but always rewarding... My children are always interesting and constantly amusing because of their ADHD. It really forces me to be more organized so I can run at their pace." It is through their own perceptions of their abilities to manage stressful situations that they are able to overcome the demands and stressors that they face on a daily basis. Parents will continue to find creative ways to meet the challenges and share in the joys of raising children who have ADHD.

**APPENDIX A**  
**SURVEY**

## Demographic Questions

(Presented at the end of the survey)

**1. What is your age?** \_\_\_\_\_

**2. What is your gender?**

(Radio buttons: Female, Male)

**3. Are you: (Check one)**

(Radio buttons: Biological Parent, Step-parent, Both, Other)

**4. What is your present marital status?**

(Drop-Down Box: Never Married, Married, Widowed, Separated, Divorced, Cohabiting/Live-In Arrangement)

**5. What is your highest educational level? (Check one)**

(Radio buttons: Less than high school, GED, High School Diploma, Associate Degree, Bachelors Degree, Masters Degree, Ph.D./M.D./Advanced Degree)

**6. Which of the following best describes your ethnic background?**

(Radio buttons: Asian, Black, Hispanic, Native American (American Indian), White (Caucasian), Multi-ethnic, Other)

If multiethnic, then **If you answered “Multi-Ethnic” for Ethnic/Racial background, then please specify:** \_\_\_\_\_

If other, then **If you answered “Other” for Ethnic/Racial background, then please specify:** \_\_\_\_\_

**7. What is your employment status? (Check one)**

(Radio buttons: Full-time, Part-time, Unemployed)

**7a. How many hours you are involved in paid employment per week?** \_\_\_\_\_

**7b. What is your occupation?** \_\_\_\_\_

**7c. Do you work from home?**

(Radio buttons: Yes, No, Occasionally)

**8. What is your approximate yearly family income, which includes the combined income of you and your spouse or partner? (Check one)**

(Radio buttons: Below \$15,000, \$15,001 - \$30,000, \$30,000 - \$45,000, \$45,001 - \$60,000, \$60,001 - \$75,000, \$75,001 - \$80,000, \$80,001 - \$95,000, \$95,001 - \$110,000, Over \$110,000)

**9. Is your spouse/partner employed?**

(Radio buttons: Yes, No, I do not have a spouse/partner)

If yes, then **What is your spouse’s or partner’s occupation?** \_\_\_\_\_

If yes, then **How many hours per week is your spouse or partner involved in paid employment?** \_\_\_\_\_

If yes, then **Does your spouse or partner work from home?**

10. How many children reside in your household? \_\_\_\_\_

11. Please indicate the age, gender, relation, and days in school/programs of each child living in your home.

	Age	Gender	Relation to Self	Days per Week in School or Programs Outside the Home
Child #1				
Child #2				
Child #3				
Child #4				
Child #5				

12. Have any of your children been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) by a doctor, psychologist, or other mental health professional?  
(Radio buttons: Yes, No)

If yes, then:

Please list the age and gender of each child that has been diagnosed with ADHD. Please also include the age when the child was diagnosed, and type of ADHD, if known.

	Age	Gender	Age at Diagnosis	Type of ADHD
Child #1				
Child #2				
Child #3				
Child #4				
Child #5				

13. Have any of your children been diagnosed with any other disabilities or conditions by a doctor, psychologist, or other mental health professional?  
(Radio buttons: Yes, No)

If yes, then:

**Please list any other diagnoses your child or children may have. In the text box, please type in the child's age first, and then type in any other diagnoses. If more than one child has another diagnosis, then please list each child on a separate line.**

	Age	Gender	Other Diagnoses
Child #1			
Child #2			
Child #3			
Child #4			
Child #5			

**14. Are any of your children presently taking medications?**

(Radio buttons: Yes, No)

If yes, then:

**Please list any medications that your child or children are taking. In the text box, please type in the child's age first, and then type in what medication(s) your child is taking. If more than one child is taking medication, then please list each child on a separate line.**

	Age	Gender	Medication
Child #1			
Child #2			
Child #3			
Child #4			
Child #5			

**15. Has anyone else in your family filled out this particular survey?**

**16. Is there anything else you would like to share concerning your experiences as a parent of a child with ADHD?**

**17. Are there additional thoughts or feelings you would like to share?**

### Parenting Daily Hassles Scale (Crnic & Greenberg, 1990)

Please read each item and circle how often it happens to you (never, rarely, sometimes, a lot, or constantly), and then circle how much of a 'hassle' you feel that has been for you for the past few weeks. If you have more than one child, these events can include any or all of your children.

	HOW OFTEN IT HAPPENS					DEGREE OF HASSLE				
	Never	Rarely	Sometimes	A lot	Constantly	NO HASSLE		BIG HASSLE		
1) Continually cleaning up messes of toys or food.	1	2	3	4	5	1	2	3	4	5
2) Being ragged, whined at, complained to.	1	2	3	4	5	1	2	3	4	5
3) Mealtime difficulties (picky eaters, complaining, etc.).	1	2	3	4	5	1	2	3	4	5
4) The kids don't listen- won't do what they are asked without being nagged.	1	2	3	4	5	1	2	3	4	5
5) Babysitters are difficult to find.	1	2	3	4	5	1	2	3	4	5
6) The kids' schedules (e.g., preschool, school naps, other activities) interfere with meeting your own or household needs.	1	2	3	4	5	1	2	3	4	5
7) Sibling arguments or fights require a "referee."	1	2	3	4	5	1	2	3	4	5
8) The kids demand that you entertain or play with them.	1	2	3	4	5	1	2	3	4	5
9) The kids resist or struggle over bedtime with you.	1	2	3	4	5	1	2	3	4	5
10) The kids are constantly under foot, interfering with other chores.	1	2	3	4	5	1	2	3	4	5
11) The need to keep a constant eye on where the kids are and what they are doing.	1	2	3	4	5	1	2	3	4	5
12) The kids interrupt adult conversations or interactions.	1	2	3	4	5	1	2	3	4	5
13) Having to change your plans because of an unpredicted child need.	1	2	3	4	5	1	2	3	4	5
14) The kids get dirty several times a day, requiring changes of clothes.	1	2	3	4	5	1	2	3	4	5
15) Difficulty getting privacy (e.g., in the bathroom).	1	2	3	4	5	1	2	3	4	5
16) The kids are hard to manage in public (grocery store, shopping center, restaurant).	1	2	3	4	5	1	2	3	4	5
17) Difficulties in getting kids ready for outings and leaving on time.	1	2	3	4	5	1	2	3	4	5
18) Difficulties in leaving kids for a night out or at school or day care.	1	2	3	4	5	1	2	3	4	5
19) The kids have difficulties with friends (e.g., fighting, trouble getting along, or no friends available).	1	2	3	4	5	1	2	3	4	5
20) Having to run extra errands to meet kids' needs.	1	2	3	4	5	1	2	3	4	5



## Family Crisis Oriented Personal Evaluation Scales (FCOPES)

(McCubbin, Olson, & Larsen, 1987)

How well does each statement below describe your attitudes and behaviors in response to problem or difficulties? Please answer as each statement applies to you.

*When facing problem/difficulties in the family, we respond by:*

<b>Strongly Disagree (A)</b>	<b>Moderately Disagree (B)</b>	<b>Neither Agree Nor Disagree (C)</b>	<b>Moderately Agree (D)</b>	<b>Strongly Agree (E)</b>
----------------------------------	------------------------------------	---	---------------------------------	-------------------------------

1. Sharing our difficulties with relatives.
2. Seeking encouragement and support from friends.
3. Knowing we have the power to solve major problems.
4. Seeking information and advice from persons in other families who have faced same or similar problems.
5. Seeking advice from relatives.
6. Seeking assistance from community agencies and programs
7. Knowing that we have the strength within our family to solve the problem.
8. Receiving gifts and favors from neighbors.
9. Seeking information from the family doctor.
10. Asking neighbors for favors or assistance.
11. Facing the problems "head on" and trying to get a solution right away.
12. Watching TV.
13. Showing that we are strong.
14. Attending church services.
15. Accepting stressful events as facts of life.
16. Sharing concerns with close friends.
17. Knowing luck plays a big part in how well we are able to solve a family problem.
18. Exercising to stay fit and reduce tension.
19. Accepting that difficulties occur unexpectedly.
20. Doing things with relatives.
21. Seeking professional counseling for family difficulties
22. Believing we can handle our own problems.
23. Participating in church activities.
24. Defining the family problem in a more positive way so that we do not become too discouraged.
25. Asking relatives how they feel about the problems we face.
26. Feeling that no matter what we do to prepare, we will have difficulty handling problems.
27. Seeking advice from a minister.
28. Believing if we wait long enough, the problem will go away.
29. Sharing problems with our neighbors.
30. Having faith in God.

## Parental Expectations and Perceptions of Children's Sibling Relationships

Questionnaire (Kramer & Baron, 1995)

### **WHAT I SEE AS A GOOD SIBLING RELATIONSHIP BETWEEN CHILDREN**

*Instructions:* Imagine a family---not necessarily your own---in which two children get along very well. These children are the same ages and gender as your children. How frequently do you think each of the following occurs in this kind of relationship?

1 = Never    2 = Rarely    3 = Sometimes    4 = Usually    5 = Always

- 1) Physical aggression (hitting, pushing, etc.)
- 2) Sharing
- 3) Jealousy
- 4) Playing together in a single activity
- 5) Competition
- 6) Respecting each other's property
- 7) Rivalry
- 8) Sharing worries or concerns
- 9) Anger or hostility
- 10) Loyalty or sticking up for one another
- 11) Arguments
- 12) Comforting one another
- 13) Fighting over territory or space
- 14) Protectiveness—looking out for the other's welfare
- 15) Feeling proud of one another
- 16) Conflicts where the problem never gets worked out
- 17) Talking to each other, conversations
- 18) Fighting over objects
- 19) Helping one another
- 20) Threats
- 21) Teaching (how to play a game, how to read, etc.)
- 22) Affection (hug, kiss, saying "I love you," etc.)
- 23) Trying to control each other's behavior using phrases like "Don't do that," "Stop it," or "Leave me alone"
- 24) Kindness

## HOW I SEE MY CHILDREN'S SIBLING RELATIONSHIP

Instructions: Please circle the number that best fits your feelings about the following aspects of your children's relationship during the past few weeks.

How frequently would you say each of the following occurs in your children's relationship?	How much would you say this is a problem?	If this is a problem, how easy would it be for you to improve this if you wanted to?	How much would you like help with this?
<b>1) Physical aggression (hitting, pushing, etc.)</b>			
(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
(4) Usually	(4) It's a very big problem	(4) Easy	
(5) Always		(5) Very easy	
<b>2) Sharing</b>			
(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
(4) Usually	(4) It's a very big problem	(4) Easy	
(5) Always		(5) Very easy	
<b>3) Jealousy</b>			
(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
(4) Usually	(4) It's a very big problem	(4) Easy	
(5) Always		(5) Very easy	
<b>4) Playing together in a single activity</b>			
(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
(4) Usually	(4) It's a very big problem	(4) Easy	
(5) Always		(5) Very easy	

<b>5) Competition</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>6) Respecting each other's property</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>7) Rivalry</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>8) Sharing worries or concerns</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>9) Anger or hostility</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	

<b>10) Loyalty or sticking up for one another</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>11) Arguments</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>12) Comforting one another</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>13) Fighting over territory or space</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>14) Protectiveness—looking out for the other's welfare</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	

<b>15) Feeling proud of one another</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>16) Conflicts where the problem never gets worked out</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>17) Talking to each other, conversations</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>18) Fighting over objects</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	
<b>19) Helping one another</b>				
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help
	(4) Usually	(4) It's a very big problem	(4) Easy	
	(5) Always		(5) Very easy	

<b>20) Threats</b>							
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help			
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help			
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help			
	(4) Usually	(4) It's a very big problem	(4) Easy				
	(5) Always		(5) Very easy				
<b>21) Teaching (how to play a game, how to read, etc.)</b>							
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help			
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help			
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help			
	(4) Usually	(4) It's a very big problem	(4) Easy				
	(5) Always		(5) Very easy				
<b>22) Affection (hug, kiss, saying "I love you," etc.)</b>							
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help			
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help			
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help			
	(4) Usually	(4) It's a very big problem	(4) Easy				
	(5) Always		(5) Very easy				
<b>23) Trying to control each other's behavior using phrases like "Don't do that," "Stop it," or "Leave me alone"</b>							
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help			
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help			
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help			
	(4) Usually	(4) It's a very big problem	(4) Easy				
	(5) Always		(5) Very easy				
<b>24) Kindness</b>							
	(1) Never	(1) It's not a problem	(1) Very difficult	(1) No help			
	(2) Rarely	(2) It's a small problem	(2) Difficult	(2) A little help			
	(3) Sometimes	(3) It's a big problem	(3) Neutral	(3) A lot of help			
	(4) Usually	(4) It's a very big problem	(4) Easy				
	(5) Always		(5) Very easy				
<b>25) In general, how well would you say your children get along with one another?</b>							
	1	2	3	4	5	6	7
	Very Poorly		Neutral		Relatively Well		

## Parental Stress Scale

(Berry & Jones, 1995)

Think of each of the following items in terms of how your relationship with your child or children typically is. Please indicate the degree to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree   2 = Disagree   3 = Undecided   4 = Agree   5 = Strongly agree

- \_\_\_\_\_ 1. I am happy in my role as a parent.
- \_\_\_\_\_ 2. There is little or nothing I wouldn't do for my child(ren) if it was necessary.
- \_\_\_\_\_ 3. Caring for my child(ren) sometimes takes more time and energy than I have to give.
- \_\_\_\_\_ 4. I sometimes worry whether I am doing enough for my child(ren).
- \_\_\_\_\_ 5. I feel close to my child(ren).
- \_\_\_\_\_ 6. I enjoy spending time with my child(ren).
- \_\_\_\_\_ 7. My child(ren) is an important source of affection for me.
- \_\_\_\_\_ 8. Having child(ren) gives me a more certain and optimistic view for the future.
- \_\_\_\_\_ 9. The major source of stress in my life is my child(ren).
- \_\_\_\_\_ 10. Having child(ren) leaves little time and flexibility in my life.
- \_\_\_\_\_ 11. Having child(ren) has been a financial burden.
- \_\_\_\_\_ 12. It is difficult to balance different responsibilities because of my child(ren).
- \_\_\_\_\_ 13. The behavior of my child(ren) is often embarrassing or stressful to me.
- \_\_\_\_\_ 14. If I had to do over again, I might decide not to have child(ren).
- \_\_\_\_\_ 15. I feel overwhelmed by the responsibility of being a parent.
- \_\_\_\_\_ 16. Having child(ren) has meant having too few choices and too little control over my life.
- \_\_\_\_\_ 17. I am satisfied as a parent.
- \_\_\_\_\_ 18. I find my child(ren) enjoyable.



## Orientation to Life Scale

(Antonovsky, 1987)

**Mark the response that best fits you:**

**Rarely or  
Never True  
(A)**

**Occasionally  
True  
(B)**

**Often  
True  
(C)**

**Usually  
True  
(D)**

**True Most  
of the Time  
(E)**

1. I have the feeling that I don't really care about what goes on around me.
2. In the past I have been surprised by the behavior of people whom I thought I knew well.
3. People whom I counted on have disappointed me.
4. Until now my life has had very clear goals and purposes.
5. I have the feeling that I am being treated unfairly.
6. I have the feeling that I am in an unfamiliar situation and don't know what to do.
7. Doing the things I do every day is a source of pleasure and satisfaction.
8. I have very mixed-up feelings and ideas.
9. I have feelings inside I would rather not feel.
10. Many people, even those with a strong character, sometimes feel like losers in certain situations. I have felt like a "loser" in certain situations.
11. When something happens, I have generally found that I overestimate or underestimate its importance.
12. I have the feeling that there's little meaning in the things I do in my daily life.
13. I have feelings that I'm not sure I can keep under control.

### Satisfaction with Life Scale

(Diener, Emmons, Larsen, & Griffin, 1985)

Using the 1 - 7 scale below, indicate your agreement with each item by marking the appropriate answer.

- 1 = strongly disagree
- 2 = disagree
- 3 = slightly disagree
- 4 = neither agree nor disagree
- 5 = slightly agree
- 6 = agree
- 7 = strongly agree

\_\_\_\_\_ 1. In most ways my life is close to ideal.

\_\_\_\_\_ 2. The conditions of my life are excellent.

\_\_\_\_\_ 3. I am satisfied with my life.

\_\_\_\_\_ 4. So far I have gotten the important things I want in life.

\_\_\_\_\_ 5. If I could live my life over, I would change almost nothing.

**APPENDIX B**  
**IRB/HUMAN SUBJECTS APPROVAL**

Office of the Vice President For Research  
Human Subjects Committee  
Tallahassee, Florida 32306-2742  
(850) 644-8673 . FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 1/16/2008

To: Jessica Huber

Address: 2077 Sandcastle Drive, Tallahassee, FL 32308  
Dept.: FAMILY & CHILD SCIENCE

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research  
The Mediating Effect of Sibling Warmth on Parental Stress in Families with Children who have Attention Deficit  
Hyperactivity Disorder

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 1/13/2009 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Carol Darling, Advisor  
HSC No. 2007.943

Office of the Vice President For Research  
Human Subjects Committee  
Tallahassee, Florida 32306-2742  
(850) 644-8673 . FAX (850) 644-4392

RE-APPROVAL MEMORANDUM

Date: 1/13/2009

To: Jessica Huber [jessicahuber@gmail.com]

Address: 2077 Sandcastle Drive, Tallahassee, FL 32308  
Dept.: FAMILY & CHILD SCIENCE

From: Thomas L. Jacobson, Chair

Re: Re-approval of Use of Human subjects in Research  
The Mediating Effect of Sibling Warmth on Parental Stress in Families with Children who have  
Attention Deficit Hyperactivity Disorder

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 1/11/2010, you are must request renewed approval by the Committee.

If you submitted a proposed consent form with your renewal request, the approved stamped consent form is attached to this re-approval notice. Only the stamped version of the consent form may be used in recruiting of research subjects. You are reminded that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc: Carol Darling, Advisor [cdarling@fsu.edu]  
HSC No. 2008.2149

**APPENDIX C**  
**COVER LETTER AND INFORMED CONSENT**

## Cover Letter

Dear Parent:

I would like to take a moment to say that I understand how challenging life can be in raising a child with Attention Deficit Hyperactivity Disorder. As a sibling of a child with ADHD, I have personal experience in both the joys and demands that my brother brought to our family. In addition, I work as a counselor at a school for students with a variety of disabilities and behavioral issues. I want to contribute to the understanding of life in families with a child with ADHD. This is where I need your help.

As part of my doctoral degree, I am conducting a research study through Florida State University under the direction of Professor Carol A. Darling, Ph.D. The goal of my research is to help better understand the stress that parents experience, as well as the coping strategies and resources that parents use to deal with stress, and the impact that stress may have on quality of life. I am seeking your help through your participation in an online survey that I am administering.

Parents that have two or more children, of which at least one child has ADHD, are eligible to participate.

This research will help counselors, psychologists, and school professionals design better programs to assist families. I hope the information that you provide will be beneficial to you and to many other parents, family members, and communities.

The survey should take approximately 25 to 35 minutes of your time. At the end, you will be eligible to enter into a drawing for one of two \$50 Target gift cards.

I would like to thank you in advance for taking the time to participate in this survey. Your responses will be kept confidential and you will in no way be identified as a participant. The survey is anonymous, and you will not be asked for your name or your children's names.

Sincerely,

Jessica Huber, Ed.S., M.S., NCC  
School Counselor  
Doctoral Candidate

Click here to access the survey:  
<<http://www.surveyparent.com>>

## Informed Consent

I freely and voluntarily, without force or coercion, consent to be a participant in the research project considering the role of siblings and stress in families of children with Attention Deficit Hyperactivity Disorder (ADHD).

This research is being conducted by Ms. Jessica S. Huber, who is a doctoral student at Florida State University, and Dr. Carol A. Darling, who is a Professor of Family and Child Sciences at Florida State University. I understand that the purpose of this research is to investigate the influence that stress has on life satisfaction in mothers and fathers of children who have ADHD.

I understand that by participating in this research, I will be asked personal questions about my daily life and the stress that I experience.

I understand that I will be asked to complete an online survey that will take approximately 25 to 35 minutes of my time. For my participation, I may enter a drawing for one of two \$50 Target gift cards. The drawing will occur no later than five months after participation in the survey.

I understand that my answers will be kept confidential to the extent allowed by law and that my name will not appear on any of the results. No individual responses will be reported in the research. Only group responses will be reported. Research records will be stored securely and only the researchers will have access to the records. All data will be destroyed after five years.

I understand that there will be minimal risk to me during this project. I may feel some mild distress as I reflect upon my feelings and answer these questions, due to the circumstances that my family and I may be experiencing. **If I feel too uncomfortable, I may stop participation at anytime I wish.**

I understand that the results from this project may benefit others in my situation, as well as benefit mental health and school professionals design better programs to assist families. I may also experience benefits in terms of better understanding of my own stress, coping, and quality of life.

I understand my participation is completely voluntary and I may withdraw from this study at any time without prejudice, penalty, or loss of benefits to which I am otherwise entitled. I have been given the right to ask and have had any questions answered concerning this study. Those questions, if any, have been answered to my satisfaction.

I understand that I may contact Ms. Jessica Huber at [jhuber@fsu.edu](mailto:jhuber@fsu.edu) or (919) 606-1332 or Dr. Carol Darling at the Department of Family and Child Sciences at Florida State University at [cdarling@fsu.edu](mailto:cdarling@fsu.edu) or (850) 644-3217, for answers about this research or my rights as a participant. Further information about this project may be obtained from the Florida State University Institutional Review Board at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or at (850) 644-8633, or by email at [jjcooper@fsu.edu](mailto:jjcooper@fsu.edu).

I have read and understand this consent form. I consent to participate in this study.

To act as your online signature, please initial in this box and hit the “done” key.



**APPENDIX D**  
**LETTERS OF PERMISSION**

Delivered-To: jessicahuber@gmail.com  
Received: by 10.114.76.7 with SMTP id y7cs351140waa;  
Thu, 4 Oct 2007 07:23:53 -0700 (PDT)  
Received: by 10.114.178.1 with SMTP id almr5749886waf.1191507443955;  
Thu, 04 Oct 2007 07:17:23 -0700 (PDT)  
Return-Path: <Keith.Crnic@asu.edu>  
Received: from epo-int2.asu.edu (epo-int2.asu.edu [129.219.187.21])  
by mx.google.com with ESMTTP id n32si3783239wag.2007.10.04.07.17.22;  
Thu, 04 Oct 2007 07:17:23 -0700 (PDT)  
Received-SPF: pass (google.com: best guess record for domain of  
Keith.Crnic@asu.edu designates 129.219.187.21 as permitted sender) client-  
ip=129.219.187.21;  
Authentication-Results: mx.google.com; spf=pass (google.com: best guess  
record for domain of Keith.Crnic@asu.edu designates 129.219.187.21 as  
permitted sender) smtp.mail=Keith.Crnic@asu.edu  
Received: from EX04.asurite.ad.asu.edu (excl1-b1.asurite.ad.asu.edu  
[129.219.12.201])  
by epo-int2.asu.edu (Switch-3.1.8/Switch-3.1.7/asu-postoffice-prod)  
with ESMTTP id 194EHJTB023352  
for <jessicahuber@gmail.com>; Thu, 4 Oct 2007 07:17:21 -0700  
X-MimeOLE: Produced By Microsoft Exchange V6.5  
Content-class: urn:content-classes:message  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable  
Subject: RE: instrument permission request  
Date: Thu, 4 Oct 2007 07:14:38 -0700  
Message-ID:  
<13BA7C37790432408C7F68689688C210035CB82B@EX04.asurite.ad.asu.edu>  
X-MS-Has-Attach:  
X-MS-TNEF-Correlator:  
Thread-Topic: instrument permission request  
Thread-Index: AcgGGzwlncS+8io7T8W2LLHBu3/C6wAdanaZ  
References: <808e56870710031712r665a8f19ib404acc35c0a36e1@mail.gmail.com>  
From: "Keith Crnic" <Keith.Crnic@asu.edu>  
To: "Jessica Huber" <jessicahuber@gmail.com>  
X-Virus-Scanned: by amavisd-new

Dear Jessica,

Thanks for your note, and I'm delighted to learn of your research interests in family stress. You certainly have my permission to use the PDH measure, and if you need a copy, just let me know and I'll be happy to forward one.

Best of luck with your dissertation project!

Keith Crnic

from family resilience <familyresilience@earthlink.net>  
to jessicahuber@gmail.com  
date Wed, Dec 12, 2007 at 2:56 PM  
subject Permissions and registration  
mailed-by earthlink.net  
signed-by earthlink.net

**Registration received.**

**Permissions granted for your measure.**

**Hamilton I. McCubbin Ph.D.**  
**Professor & Director of Research and Evaluation,**

**Center for Training and Evaluation Research in the Pacific**  
**University of Hawaii at Manoa \* School of Social Work**  
**1800 East-West Road \* 319a Henke Hall**  
**Honolulu, HI 96822 \* email: him@hawaii.edu**  
**Ph:808- 956-4605 \* Fax: 808-9563878**

***Risk and Resilience from Childhood to Aging Project***

from Jessica Huber <jessicahuber@gmail.com>  
to mccubbin@hawaii.edu  
cc mccubbin@wsu.edu  
date Wed, Dec 12, 2007 at 8:46 AM  
subject follow up on CD registration and instrument permission request  
mailed-by gmail.com

Dear Dr. McCubbin:

I just wanted to follow up on my previous request for permission to use the F-COPES in my doctoral research. I have not heard a response, so I was not sure if you received my previous email. If you would rather I send my request via fax or postal mail, I would be happy to do so. Below is my original request.

Thank you for your time and consideration of my proposal.

Sincerely,

Jessica S. Huber

attachment: F-COPES permission form

Delivered-To: jessicahuber@gmail.com  
Received: by 10.114.76.7 with SMTP id y7cs319587waa;  
Wed, 3 Oct 2007 18:02:28 -0700 (PDT)  
Received: by 10.65.204.7 with SMTP id g7mr3970098qbq.1191459748301;  
Wed, 03 Oct 2007 18:02:28 -0700 (PDT)  
Return-Path: <lfkramer@uiuc.edu>  
Received: from ACES-EXCHANGE1.college.acesnet.uiuc.edu (aces-  
xbel.aces.uiuc.edu [128.174.122.161])  
by mx.google.com with ESMTTP id r9si994855nza.2007.10.03.18.02.27;  
Wed, 03 Oct 2007 18:02:28 -0700 (PDT)  
Received-SPF: pass (google.com: best guess record for domain of  
lfkramer@uiuc.edu designates 128.174.122.161 as permitted sender) client-  
ip=128.174.122.161;  
Authentication-Results: mx.google.com; spf=pass (google.com: best guess  
record for domain of lfkramer@uiuc.edu designates 128.174.122.161 as  
permitted sender) smtp.mail=lfkramer@uiuc.edu  
X-MimeOLE: Produced By Microsoft Exchange V6.5  
Content-class: urn:content-classes:message  
MIME-Version: 1.0  
Content-Type: multipart/alternative;  
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Date: Wed, 3 Oct 2007 20:00:55 -0500  
Message-ID: <E071B8D9C460264D957CB951E0E607B8B931F6@ACES-  
EXCHANGE1.college.acesnet.uiuc.edu>  
X-MS-Has-Attach:  
X-MS-TNEF-Correlator:  
Thread-Topic: instrument permission request  
Thread-Index: AcgGHTowAH09T7FxTGepG5JrdIO8ggABMpDs  
References: <808e56870710031726ilef238d3r544e39d190093e45@mail.gmail.com>  
From: "Kramer, Laurie" <lfkramer@uiuc.edu>  
To: "Jessica Huber" <jessicahuber@gmail.com>

This is a multi-part message in MIME format.

-----=\_NextPart\_001\_01C80622.3B47EA79  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Dear Jessica,

Yes, you may have permission to use the PEPC-SRQ for your dissertation.  
Do you need a copy?

I would very much like to receive a summary of your results once you've  
completed your dissertation.

Good luck with your project!

Laurie Kramer  
Dept of Human and Community Development  
University of Illinois at Urbana-Champaign

Delivered-To: jessicahuber@gmail.com  
Received: by 10.114.76.7 with SMTP id y7cs352092waa;  
Thu, 4 Oct 2007 07:44:24 -0700 (PDT)  
Received: by 10.142.73.8 with SMTP id v8mr748757wfa.1191509063861;  
Thu, 04 Oct 2007 07:44:23 -0700 (PDT)  
Return-Path: <judy-berry@utulsa.edu>  
Received: from mx3.utulsa.edu (mx3.utulsa.edu [129.244.3.228])  
by mx.google.com with ESMTP id r15si1572316nza.2007.10.04.07.44.23;  
Thu, 04 Oct 2007 07:44:23 -0700 (PDT)  
Received-SPF: pass (google.com: domain of judy-berry@utulsa.edu designates  
129.244.3.228 as permitted sender) client-ip=129.244.3.228;  
Authentication-Results: mx.google.com; spf=pass (google.com: domain of judy-  
berry@utulsa.edu designates 129.244.3.228 as permitted sender)  
smtp.mail=judy-berry@utulsa.edu  
Received: from mx4.utulsa.edu (mx4.utulsa.edu [129.244.3.229])  
by mx3.utulsa.edu (Postfix) with ESMTP id 93668773BD  
for <jessicahuber@gmail.com>; Thu, 4 Oct 2007 09:44:26 -0500 (CDT)  
Received: from messier (messier.utulsa.edu [129.244.3.48])  
by mx4.utulsa.edu (Postfix) with ESMTP id 2C03477141  
for <jessicahuber@gmail.com>; Thu, 4 Oct 2007 09:44:26 -0500 (CDT)  
Received: from adsl-70-143-59-77.dsl.tul2ok.sbcglobal.net  
(adsl-70-143-59-77.dsl.tul2ok.sbcglobal.net [70.143.59.77]) by  
webmail.utulsa.edu (Horde MIME library) with HTTP; Thu, 04 Oct 2007  
09:32:06 -0500  
Message-ID: <20071004093206.6kd3h5iu8g4g8c0s@webmail.utulsa.edu>  
Date: Thu, 04 Oct 2007 09:32:06 -0500  
From: judy-berry@utulsa.edu  
To: Jessica Huber <jessicahuber@gmail.com>  
Subject: Re: instrument permission request  
References: <808e56870710031701k2b0670d7p3508e79016c0ef85@mail.gmail.com>  
In-Reply-To: <808e56870710031701k2b0670d7p3508e79016c0ef85@mail.gmail.com>  
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Content-Type: text/plain;  
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DelSp="Yes";  
format="flowed"  
Content-Disposition: inline  
Content-Transfer-Encoding: quoted-printable  
User-Agent: Internet Messaging Program (IMP) H3 (4.1.3)

Jessica--

You have my permission to use the Parental Stress Scale. If you will  
send your mailing address, I will send additional information about  
the scale.

Good luck with your research. I would be interested in seeing your  
results when you are finished.

Judy berry

*Ed Diener, Ph.D.  
Psychology Department  
University of Illinois  
603 E. Daniel St.  
Champaign, IL 61820  
217-333-4804 edieneer@s.psych.uiuc.edu*

Dear Requester:

Thank you for requesting the Satisfaction with Life Scale. As you may know, there is an article in the 1985, Volume 45, issue of Journal of Personality Assessment, which reports on the validity and reliability of the scale. In addition, we currently have another article titled, "Review of the Satisfaction With Life Scale" in Psychological Assessment\*. The results reported in this second article are extremely encouraging. The SWLS correlates substantially with reports by family and friends of the target person's life satisfaction, with number of memories of satisfying experiences, and with other life satisfaction scales. The SWLS was examined in both a college student and elderly population. In both populations the scale was valid and reliable (internally consistent and stable).

The SWLS is in the public domain (not copyrighted) and therefore you are free to use it without permission or charge. You will, however, have to type or reproduce your own copies.

Best wishes,

Ed Diener, Ph.D.  
Professor

\*Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment*, 5, 164-172.

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## BIOGRAPHICAL SKETCH

Jessica Sarah Huber was born and raised in the Los Angeles area. She was accepted with honors at University of California, Irvine. During her undergraduate studies, Jessica was a hall representative with RHA, a member of the judicial advisory board, and a peer mentor. She also worked as a program leader in child care, both at a farm school, as well as an after-school and summer program. She graduated in three years with two majors: political science and psychology. Soon thereafter, she enrolled in law school. After one day, she learned enough to realize that law was not the career for her. She left law school the next day, but got to keep the mug they gave her.

For the next three years, Jessica worked as a workers' compensation insurance adjuster. This job and volunteering at the community center kept her quite occupied. However, she looked back at her years in child care and realized that her heart was working with children. So, she decided to pursue a master's degree in counseling. Upon the offer of a fellowship, she chose to attend Florida State University's combined master's and educational specialist degree program, specializing in school counseling.

Moving from Los Angeles to Tallahassee was quite the change, as one could imagine. However, good friends made the stay worthwhile. She was a member of the Congress of Graduate Students and an officer in the Graduate Counseling and Psychological Organization. She worked as a test administrator and later on as an MIS coordinator. After completing her master's studies, she decided to continue in a doctoral program, but this time in child development. Jessica discovered her love of teaching college level courses while instructing a pre-practicum counseling techniques class in her master's program. She was able to continue this pursuit of teaching throughout her doctoral studies. She taught undergraduate courses in family relationships, parenting, child development, and lifespan development. She was honored for her teaching with an award as an Outstanding Teaching Assistant. She was also a research assistant and conducted program evaluations for the student health center.

Jessica currently works as the school counselor and head of the student services department at a school for students with behavior and emotional disabilities in North Carolina. She enjoys traveling, cooking, gardening, drawing, and making pottery.