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EVIDENCE FOR CHILD EFFECTS IN THE PREDICTION OF PARENT STRESS IN FAMILIES WITH A MENTALLY RETARDED CHILD: THE ROLE OF FAMILY LIFE CYCLE CONSIDERATIONS

By

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ABSTRACT

EVIDENCE FOR CHILD EFFECTS IN THE PREDICTION OF PARENT STRESS IN FAMILIES WITH A MENTALLY RETARDED CHILD: THE ROLE OF FAMILY LIFE CYCLE CONSIDERATIONS

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The current investigation makes use of a model for understanding stress and coping first proposed by Lazarus and Folkman (1984) to explore the relationship between characteristics of impaired children and parent stress. The study examined three major domains of child functioning: adaptive behavior, behavior problems, and personality characteristics. Also examined were several variables related to family life cycle stage including whether the impaired child was in the midst of a "critical period" of developmental transition (e.g., beginning school, entering adolescence, or preparing to leave the home) and how the presence of younger or older siblings tended to alter the developmental progress of the family as a whole, either increasing or decreasing parent stress. Results provided some evidence for the importance of child personality as a predictor of parent stress. Poor child self-care skills emerged as a significant predictor of stress for fathers in the current sample but not for mothers. The potential importance of moderating variables such as social support and marital quality is discussed as they relate to these findings.

Dedication

In memory of Dema Slavutsky

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INTRODUCTION

Beginning with the work of Schonell and Watts (1956) and continuing with the work of Farber (1959), researchers have long been interested in studying the impact of a mentally impaired child on the family. Perhaps stemming from the stigma which for many years accompanied the birth of a disabled child, the long-standing assumption was that a mentally impaired child had an impact on family functioning that was unavoidably negative. Indeed, much of the research of the late 1950's and early 1960's tended to adopt this perspective of an impaired child as an unavoidable "pathogen" with little attention being paid to differences among impaired children and to differences among the families faced with the task of raising the child (e.g., Holt, 1958; Worchell & Worchell, 1961).

Fortunately, access to better information about mental retardation in the general public may have removed some of this historical stigma and led to the recognition by many researchers that many families with an impaired child do successfully cope (e.g., Glidden, Valliere & Herbert, 1988). While the family research of the last 40 years has come a long way in beginning to clarify some of the processes associated with successful adaptation, the goal of the current investigation is to examine the impact of different child and family characteristics more closely.

One central hypothesis of the current investigation is that the degree to

which variations in adaptive functioning among impaired children produces stress for parents will depend upon several components of family composition which establish the family life cycle stage. Other child characteristics such as behavior problems, the child's "likability", or whether the child is in the midst of a "critical period" of developmental transition are hypothesized to be less influenced by these family differences and may function as salient predictors of stress regardless of the life cycle stage of the family. The current investigation will, therefore, move away from treating both the child and the family as a homogeneous entity so as to begin to explore adaptational processes on a more microscopic level.

Chapter 1

LIFESPAN PERSPECTIVES TO ADAPTATION

The discovery that a child is impaired introduces nearly universal experiences of grief into the family. Lynn Wikler has been among the most active researchers in examining both the initial reaction to this discovery as well as family coping over time. Wikler (1981) has reintroduced a model of coping first proposed by Olshansky (1962). Both researchers seem to agree with other work which suggests that parents go through a period of "mourning" for the "death" of their unrealized normal child shortly after the birth of an impaired child (e.g., Gath, 1977; Raymond, Slaby & Lieb, 1975). However, Olshansky and, more recently, Wikler have argued that the intense mourning phase does not terminate with unconditional acceptance, but rather endures in the form of "chronic sorrow." While Olshansky has proposed that parent stress is maintained at constant levels throughout the child's development, Wikler has provided only partial support for the validity of such a model. In one study (Wikler, Wasow, & Hatfield, 1981), contrary to the predictions of the chronic sorrow model, approximately 25 percent of parents failed to report continuing stress after the initial adjustment period immediately following the birth of the impaired child. The remaining 75 percent of the parents in her study, however, reported continuing stress beginning shortly after birth through the launching

phase when the child would otherwise be preparing to leave the home. Wikler et al.'s findings do not suggest a pervasive and continuous experience of sorrow across the parenting life cycle as Olshansky had hypothesized. Instead, parents seem to move in and out of periods of stress at critical points over the course of the child's development (e.g. birth, school placement, etc.).

Somewhat surprisingly, the impact of the impaired child on parent functioning does not seem to become less intense over time. Parents do not "get used to" the events which, instead, seem to serve as reminders of their child's impairment. While Wikler's research has provided compelling evidence for the continuing nature of familial stress, it is less clear how the experience of a family raising an impaired child differs from a family raising a typically developing child. One might expect to find evidence for increased levels of stress in all families with children during most of Wikler's critical stages.

A related problem with Wikler's research is that her evidence for the cyclical nature of chronic sorrow has relied on retrospective data as she asks parents to reflect upon stress at particular points during their child's development long after they have experienced the "critical stage." Her findings, therefore, may be particularly susceptible to a tendency by parents to report expected stress levels during these times rather than accurately depicting their functioning at and between these critical stages. Despite these difficulties,

Wikler's work has helped set aside notions commonly held by many clinicians that adverse reactions to the birth of an impaired child are typically time-bound for, indeed, this does not seem to be the experience of the majority of parents. Her work has been helpful in identifying the potential importance of salient developmental expectancies to understanding coping. Interestingly, though, Wikler's work has done little to identify those characteristics of children and families which may lead to successful coping for some and poorer adjustment for others.

Turnbull, Summers, and Brotherson (1986) have presented a model of family adaptation that is not inconsistent with Wikler's findings. Turnbull et al. do a better job, however, at identifying the issues associated with raising a mentally impaired child at particular points in the family life cycle. Their model identifies seven developmental stages the authors claim are common to all families: (a) the couple, (b) childbearing, (c) school age, (d) adolescence, (e) launching, (f) postparental, and (g) aging. According to their model, the periods during which families are moving between these relatively stable stages are characterized by high levels of stress in many families. During the transitional period from childbearing to school age, for example, parents with an impaired child may need to deal for the first time with (a) realizations about school performance and their own level of involvement as an advocate in their child's education, (b)

reactions of a new peer group, and (c) defining (or redefining) their own educational ideology. Similarly, parents with children transitioning to adolescence must confront a variety of issues involving the movement toward increased independence.

One advantage of the Turnbull et al. model is that it allows for specific predictions to be made about the family's ability to make successful developmental transitions based, in part, upon the actual skills the child brings to the task. For example, to the extent that movement into an appropriate peer group is an important component of a transition, children with better social skills will make this transition easier for the family. As a way of facilitating these predictions in families with more than one child, Turnbull and her colleagues have also attempted to account for the presence of children of various ages within the family system. According to their model, families may simultaneously be experiencing two or more life cycle stages as defined by the age and developmental status of each of the children in the family. In this way, it becomes theoretically possible to evaluate a child's role in the family independently of other siblings who may place the family at different life cycle stages.

While Turnbull et al. deserve credit for their attempt to utilize a developmentally sensitive model for evaluating a child's impact on the family,

according to a family systems perspective, families need to be studied in combinations which are more complex than the isolated sets of parent-child relationships which form the basis of the Turnbull model. In applying the model to evaluate the influence of a particular child, one is left with two choices, neither of which capture this complexity. The first possibility is that an individual child's impact as a potential stressor for parents can be evaluated independent of the age of other siblings. In utilizing this alternative, an individual child's age becomes the factor which "sets" the "family" life cycle stage. Unfortunately, this method operates on the assumption that the contribution of siblings to overall parent stress is minimal at best and that the presence of siblings of different ages in the home has no effect on the manner in which a parent perceives and is influenced by the "target" child. This presumption ignores what for many parents is the reality of family life. The alternative and much more complex means of applying the Turnbull model would involve creating some sort of summing procedure in which the influence of each isolated parent-child pair would somehow be combined to predict the total stress a parent is likely to be experiencing from the demands place on them by multiple children. Unfortunately, Turnbull et al. offer no suggestion for how one would go about determining the relative weight that might be applied to a given parent-child pair as a potential source of stress at a given point in time. Even if such a

calculation were possible, a parent's tendency to focus on a particular child demand is likely to be quite unstable over time. One might expect that most parents shift attention back and forth from child to child as they attempt to manage the demands they experience as being most salient. Missing from the Turnbull model, then, is the notion that families pass through stages of development as a unit and that to understand a family's life stage, one must consider the family as a whole.

Hoffman and Manis (1978) have provided an alternative model for understanding family life cycle stages. Utilizing a sample composed of families with typically developing children, they have identified 7 nonlinear "stages" which present different challenges for families with children. The stages they identify include: (a) preschool children only (<5 years), (b) oldest child 5-12 years; youngest <5 years, (c) all children 5-12 years, (d) oldest child 13-18 years; youngest <5 years, (e) oldest child 13-18 years; youngest 5-12 years, (f) all children 13-18 years, (g) oldest child >18 years; youngest 5 years or older. The Hoffman and Manis approach, while similar to that of the Turnbull group in its understanding of the family as a developmental entity, differs in that the ages of various siblings are considered in combination to define the single family life cycle stage. The advantage of this approach is that parents can be understood in terms of the developmental expectancies associated with a particular family

life cycle stage rather than with the age of an individual child. While the Hoffman and Manis model has not yet been applied to families with an impaired child, the advantages of implementing such an approach seem clear; the potentially important contribution of other siblings in establishing the family's developmental stage may serve to either exacerbate or ameliorate demands presented by an impaired child. When child demands do not represent significant deviations from the expected parenting tasks of the life cycle stage (e.g. when young, typically developing siblings are present in the family), the stress associated with these stages may be greatly reduced in comparison to families where unusual child demands are inconsistent with family developmental expectancies.

In highlighting the importance of examining the family constellation as a single entity when considering family developmental outcomes, Hoffman and Manis have made a valuable contribution to the adaptational literature. A complication that arises from their model, however, is that each of the life cycle stages which they define is subject to multiple and, at times, contradictory sets of influences which limit the usefulness of the model to predict the stress that should be associated with each stage. For example, in assessing the stress that might be associated with Hoffman and Manis' second life cycle stage, where the oldest child is 5-12 years and the youngest is <5 years of age, separate factors

might be expected to mitigate and exacerbate experienced stress. While, consistent with Turnbull et al.'s work, stress might be expected to intensify as the family negotiates the child's transition into school, for example, the presence of an older child may have better prepared the family for dealing with a young child making this transition by previously establishing reasonable developmental expectancies. Predictions are complicated all the more when one of the siblings is impaired in such a way as to cause deviations from the expected parenting experience or developmental transition.

The current investigation will attempt to highlight what seem to be the most crucial components of the multifaceted "life cycle stage". The first component which will be examined is whether the mentally impaired child is in the midst of one of the "critical periods" of developmental transition (i.e. adjusting to school, entering adolescence, or preparing to leave the family). The family systems literature has noted that the failure to make developmental transitions within the anticipated time frame may be particularly difficult for families (Haley, 1973; Neugarten, 1976). Unfortunately, for the majority of families with a mentally impaired child, the failure to follow the "typical" family life cycle trajectory may be the norm rather than the exception and may work to compound transitional difficulties.

The second component which will be examined involves the ages of any

other siblings. Ambert (1992) has noted that a large body of literature already exists examining how parents respond differently to first-born versus later-born children and how the introduction of a new child into the family influences existing children. Ambert points out, however, that there is a paucity of data which has looked at how later-born children affect their parents in different ways than do earlier-born children (p.60). She does suggest, however, that on the basis of autobiographical data she has collected from large numbers of college students, that first-born siblings seem to "socialize" their parents by providing the framework in which parents may learn first-hand about expected roles. In the case where there are typically developing children (the source of Ambert's data), one might then expect the presence of older children to make the actual task of raising subsequent children somewhat easier, since parents have experienced the parenting role before.

In contrast, in the case where there is a typically developing sibling and a younger mentally impaired child, the picture may become more complicated. For example, as an impaired child becomes older, the presence of an older, typically developing sibling may serve to exacerbate stress since the failure of the impaired child to meet parental expectations involving increased independence will likely be all the more salient for parents who have been through these transitions before with other siblings. In other words, as Turnbull

et al. suggest, there may well be a developmental shift in the types of demands which parents find most salient as the parenting focus changes from caretaking of the young child to fostering increasing independence in the adolescent.

One might expect that there also may be beneficial effects which result from the presence of an older, typically developing sibling and an impaired child. Perhaps, for example, older siblings tend to assist in some of the parenting tasks, relieving a parent's burden of care. Unfortunately, these potentially beneficial effects are not borne out by the literature. Work by Baldwin (1976) has demonstrated that parenting a child with a mental impairment tends only to polarize parents into taking on more "traditional" caretaking roles. Parke (1986) has corroborated these results finding that fathers tend to take on a rather inactive role in caring for a disabled child relative to fathers involved in the rearing of a typically developing child. Parke has found that in families with an impaired child, mothers tend to do the vast majority of the caretaking while fathers (and siblings) tend to disengage from caretaking duties, fathers instead focusing more heavily on providing income for the family.

There has been little research which has examined the potential impact a younger sibling may have on the stress experienced as a result of the presence of an impaired child. If anything, one might expect that the presence of a younger sibling tends to slow down the family's development. As a result, the

presence of a younger sibling in the family, when the impaired child is young, may tend to minimize parental stress that might result from the need to engage in parenting behaviors with their impaired child that are more appropriate for younger children. In this way, the effect of an impaired child's failure to make a particular developmental transition in a timely manner, thereby impeding the development of the family as a whole, may be diminished when there is another child present who has also not made this transition

As both the impaired child and the younger sibling becomes older, however, the presence of a younger sibling might have quite a different effect. As Wikler (1981) has noted, one of the critical points in development which parents have pointed to as a time of increased stress is when a younger, typically developing sibling overtakes the impaired sibling in terms of acquired skills. While the younger, typically developing sibling grows older and acquires new skills which allow for increasing independence, many impaired children are ultimately limited in their ability to function independently outside of the home (Ramey, Dossett, & Echols, 1996). As a result of this functional "ceiling" which many older impaired children ultimately reach, the ability of a younger sibling to take on increasing amounts of independence may highlight for parents that their impaired child will never achieve similar levels of functioning, exacerbating stress which they may experience. Once again, a developmental shift may well

occur in the types of demands which parents find most salient as the parenting focus changes from caretaking toward fostering increasing independence.

Chapter 2

A MICROSCOPIC MODEL OF ADAPTATION

In order to better understand what processes are at work as a family struggles to cope with raising an impaired child, it may be helpful to examine a more microscopic model for studying adaptation. Lazarus and Folkman (1984) have provided a model of coping which is useful for beginning to pull apart some of these complicated mechanisms. They have proposed a three stage model of adaptation. According to their model, *demands* are defined as the external events and/or conditions which act upon the individual. For example, a mentally impaired child who requires constant and intensive special care would present a demand for those responsible for the child's care. *Stress*, according to this model, is one possible subjective reaction of an individual who encounters the demand. While an impaired child who requires constant and intensive care certainly presents extra demands for parents, not all parents will be stressed by these demands. Of those parents who do experience a particular demand as a stressor, only a subset of those will be strained by this stress. A *strain*, then, according to the model, can be thought of as the personal and/or familial ramifications of stress (e.g., hostility or depression).

Inherent in Lazarus and Folkman's understanding of stress and coping is that a powerful relationship exists between individual and environmental

variables. They discuss an individual appraisal process in which events are evaluated to determine which demands will be perceived as stressors. It is precisely this sort of appraisal process which is hypothesized to be influenced by the family life cycle stage. Parents may be likely to appraise the fact that an adolescent demonstrates limited independent functioning differently in a family where there are only older children than in a family where very young children are also present.

Among the more powerful processes at work are what the authors refer to as primary and secondary appraisal mechanisms. Primary appraisal is described as a process in which an initial judgment is made that a demand "is irrelevant, benign-positive, or stressful." Clearly, demands which are evaluated to be either irrelevant or benign-positive are unlikely to produce stress for the individual. While a primary appraisal process which leads to the evaluation that a demand is stressful is the only type which, according to the Lazarus and Folkman model, may ultimately lead to stress, it does not necessarily do so. This is where a secondary appraisal process comes into play. Lazarus and Folkman define a secondary appraisal process as one in which a judgment is made about what might and can be done about a demand which is viewed as being stressful. Thus, even if a demand is perceived as being potentially stress inducing, the available coping resources and an individual's ability to utilize

these resources may allow for stress to be avoided.

In spite of the intuitive appeal of the Lazarus and Folkman model, the mental retardation literature has taken a much more global approach to understanding family adaptation. As Glidden (1993) has pointed out, many researchers have been conceptually imprecise in combining various stages of the adaptational model. Most commonly, the mentally impaired child has been thought of as a generic "stressor" who produces "stress" for many parents. Many studies have combined the Lazarus and Folkman concepts of demand, stress, and strain such that when researchers claim to be measuring stress, in reality, they are utilizing outcome variables associated with some conglomeration of these three components. As shall be discussed shortly, the large number of studies which have made use of the Questionnaire on Resources and Stress (Holroyd, 1974) have contributed to this conceptual imprecision. One possible explanation for this phenomena is that research has often focused on identifying such potential moderators and mediators of the impact of the child's handicap rather than on more microscopic processes. Indeed, there is now substantial evidence that factors such as social support (Dunst, Trivette, & Cross, 1986; Greenberg & Crnic, 1988), family environment (Blacher, Nihira, & Meyers, 1987; McCubbin & Huang, 1989; Mink, Nihira, & Meyers, 1983), and marital quality (Floyd & Zmich, 1991) may be critical

mediators of stress in many families. The literature seems to offer support for Lazarus and Folkman's emphasis on the importance of a secondary appraisal process as all of these studies in some way address the resources available to family members as well as an individual's ability to utilize these resources effectively. When thought about in this way, the fact that the impact of these resource variables is often so powerful as to dwarf any significant child effects is not surprising. The secondary appraisal process is, after all, the final "link" in the chain between a demand and experienced stress. Despite the importance of these mediating variables, by more carefully identifying those aspects of child functioning which lead to stress for parents over time, we may be better able to target interventions to periods of time and areas of family life where they are most needed. In this way, even when a secondary appraisal process would likely lead to experienced stress due to factors such as social isolation or a conflictual or absent marital relationship, clinicians might attempt to eliminate the need to utilize later stage coping resources by targeting demand characteristics which are likely to be particularly salient stressors at a particular point in time. Alternatively, interventions might focus on increasing resources which are likely to improve an individual's ability to cope with only those most salient child demand characteristics as they vary across the family life cycle.

Chapter 3

IMPACT OF CHILD CHARACTERISTICS ON THE FAMILY

Researchers have already attempted to identify the role that level of retardation (Friedrich, Wilturner & Cohen, 1985), the gender of the child (Beckman, 1991; Krauss, 1993) and the type of impairment (Minnes, 1988) may play in understanding stress with mixed results. Unfortunately, a problem with this research stems from the uncritical use of the Questionnaire on Resources and Stress (QRS) (Holroyd, 1974) and a variety of short forms of the instrument which have been developed in later work (e.g. Friedrich, Greenberg, & Crnic, 1983; Holroyd, 1982). As Glidden (1993) has pointed out, while remaining the most widely used instrument for assessing various characteristics of "stress" in families with impaired children, the QRS is a mixture of items which measure demands, stress, and strain. It is not surprising, therefore, that a scale such as "limits on family opportunities" is related to the degree of handicap when it contains items such as: "We spend up to 25 percent of our income on medical care (or care for _____)." Many of the scale items which claim to be measures of **stress** seem to really be assessing the degree to which the child presents particular **demands** for family members. By utilizing the QRS scales uncritically, the results of many previous studies become difficult to interpret since the predictor and outcome variables in each, at times, seem to be measuring the

same construct.

A larger, more conceptual problem in looking at the potential impact of global factors such as level of retardation and type of impairment on stress is that these variables tell us very little about the parenting experience associated with raising the child. What is it about raising a child with an IQ of 60 that may be different from raising a child with an IQ of 45? It seems likely that these variables are only indirectly related to stress that parents experience. It seems much more likely, for example, that children of different IQ levels may produce different amounts of stress for parents not because of their level of intelligence per say but rather because of the different levels of care each child may require, the child's ability to function independently as he or she grows older, any behavioral difficulties the child may experience, or because of personality characteristics which may make the child unpleasant to live with. The current investigation will attempt to assess the impact of these seemingly crucial mediating demand variables rather than simply looking at more global descriptors. For this reason, the child's self-care skills, independent living skills, behavior problems, and "likability" will all be examined in the current investigation since these variables seem to more directly influence the parenting experience. Literature which has examined the impact of one additional demand variable, whether the child is in the midst of a "critical period" of developmental

transition, has already been reviewed. It seem likely that critical periods do indeed present unique challenges for many families. Critical periods will also be important to consider in the current investigation. Before predictions are made regarding the impact of any of the demand variables, it seems worthwhile to review the limited literature which has attempted to assess those remaining aspects of child functioning which are more closely related to the parenting experience.

Burden of Care as a Demand

Unfortunately, much of the research which has examined the demands associated with caring for a mentally impaired child has focused exclusively on infants. In one study, Erickson and Upshur (1989) found that while mothers did not perceive child caretaking to be difficult overall, there were significant differences between mothers with Down Syndrome or developmentally delayed children and mothers with typically developing infants of similar age. Interestingly, Erickson and Upshur found inconsistencies between time spent caring for the child and perceived difficulty with caretaking. While no statistical analyses were conducted to examine this relationship more closely (for indeed this was not the focus of their study), the results the authors present are consistent with Lazarus and Folkman's depiction of demand and stress as distinct processes. The fact that parents have high demands placed upon them

through caring for their infant does not necessarily lead to the perception that these demands are difficult or stressful.

In another study focusing exclusively on infants, Beckman and Pokorni (1988) found that both the level of stress, and those factors that predict it, change over time. Results indicated that various aspects of the home environment and social support systems were important mediators of stress but the area in which stress was experienced varied with the age of the child. Additional or unusual caretaking demands by the child were found to be related to higher levels of stress for parents over time. Unfortunately, Beckman and Pokorni utilized the QRS as their outcome variable without first attempting to remove items which measure demands and strains from scales supposedly measuring stress. Again, these results become difficult to interpret. The general approach, however, of attempting to relate different child characteristics to experienced stress over time is similar to the one which will be utilized in the current investigation.

In a study which sought to examine the impact of 4 to 11 year old mentally impaired children on family functioning, Harris and McHale (1989) utilized a version of the American Association of Mental Deficiency's Adaptive Behavior Scale (ABS). The authors found only trends in the relationship between child characteristics and perceived stress by parents. They did, however, find a

significant relationship between both care giving and time in activities associated with raising the impaired child and child welfare concerns and time limitations which mothers experienced. The results indicate that the extra time and energy spent entertaining a mentally impaired child, no matter how entertaining or relaxing these activities may appear to be, is a source of stress for many mothers.

Behavioral Difficulties as Demands

While many researchers have examined the link between child behavioral difficulties and parent stress, few have looked at how parents react to behavior problems when the child is mentally impaired. To the degree to which behavioral problems are still viewed by parents as being under the child's control (as one might expect when discussing a mild to moderately mentally impaired sample), there would seem to be little reason to expect parents of an impaired child to be any more or less stressed by a challenging behavior than parents of a nonimpaired child. The literature on the impact of behavior problems on parents raising children who are not mentally impaired may well be quite indicative of what we might expect to find among a mentally impaired population.

Barkley (1981) has found that children with Attention-deficit Hyperactivity Disorder (ADHD) who demonstrate a variety of challenging child behaviors

induce a great deal of stress in their care givers. Barkley has found that when ADHD children are treated with stimulant medication in order to assist with the management of these behaviors, there is a corresponding improvement in the levels of stress which parents report. Similar improvements in parent stress have been reported when ADHD children have been trained to behave more appropriately via traditional behavioral psychotherapy (Brunk & Hengeler, 1984).

The impact of child internalizing symptoms as a stress inducer for parents has also been examined. Rutter (1986) has found that while a child's depressive symptoms are more likely to be ignored by parents than are externalizing behavioral difficulties such as aggression, parents of depressed children do report higher stress levels than do parents of children who are not experiencing any difficulties. Similar findings have been reported by Kovacs (1989) who, in examining the bi-directional parent-child influences which seem to affect the development of disorder, has helped to push aside the notion that young children are incapable of displaying depressive symptomatology.

"Likability" of Child as a Demand

Limited efforts have been made to relate personality characteristics of the child to parent stress. Wilton and Renaut (1986) found that parents of mentally impaired children experience more "stress" resulting from their child's social obtrusiveness and difficult personality characteristics than parents of

nonimpaired children. Unfortunately, this research suffers from an uncritical use of the QRS as its stress measure. Given the heterogeneous nature of the QRS scales, the results provide as much evidence for the conclusion that impaired children are more socially obtrusive than typically developing children as they do for the conclusion that parents are stressed by this child characteristic. Once again, the failure to separate items which assess demands, stress, and strain makes the results of this study difficult to interpret.

Age of Child as a Demand

Several studies have examined the age of the mentally impaired child as a possible source of stress for parents with mixed results. Bristol and Schopler (1983), in studying autistic adolescents have noted that stress for parents seems to increase with the age of the child. They have found that age continues to be a significant predictor of parent stress even when other factors such as adequacy of social and familial support, number of other children, mother's age and other family stressors are taken into account. Bristol and Schopler note that parents of older autistic children tend to be both more realistic and more pessimistic regarding their child's potential. As Marcus (1977) has observed, early on, parents of autistic children tend to focus heavily on language as the source of their child's difficulty. Parents believe that if they focus heavily on improving their child's communication skills, problems will eventually disappear.

By the time the autistic child reaches adolescence, for many parents, a more reasonable and disheartening set of expectations emerges. Especially when the extreme performance variability common to many autistic children is considered, much of the age effect seen in autism seems to be attributable to uncertainty about the child's future. It seems that unrealistic expectations about a mentally impaired, nonautistic child might result in a similar pattern of increased stress for parents as the child gets older. Since there may be less ambiguity with respect to present child functioning and less false optimism regarding future performance among parents of nonautistic, mentally impaired children, this may be a less frequent phenomena.

As has been reviewed earlier, the chronic sorrow model of Wikler et al. (1981) suggests that age of the mentally impaired child may not be an important predictor of stress for families. While some of the problems with this research have already been noted, an additional explanation for the negative findings of Wikler and her colleagues may be their use of a global appraisal of child functioning. In fact, as the current investigation shall explore, different characteristics of the child may be particularly salient stressors for parents at different points in the family's development, which is only partly tied to the age of the impaired child in families where there are multiple children. For this reason, the age of the impaired child alone is not expected to be a significant predictor of

parent stress in the current sample.

Chapter 4

HYPOTHESES

The current investigation will make use of Lazarus and Folkman's demand, stress, and strain paradigm. Several different characteristics of the child are expected to serve as stressors for parents but the degree to which particular characteristics serve this function is predicted to vary according to several factors related to the family's developmental stage. Figure 1 provides a summary of the constructs to be examined. The current work will attempt to confirm Wikler's notion that stress associated with raising a mentally impaired child continues as children and families develop. Several specific hypotheses have been developed:

Predicted Main Effects

1) As work by Turnbull et al. would suggest, when the mentally impaired child is in the midst of a critical period of developmental transition, parent stress levels are expected to be elevated as family members learn to take on different roles. The critical periods at which elevated stress levels are anticipated in the current sample occur when the impaired child is between 5 and 7 years old (transition to school), between 11 and 13 years (transition to adolescence), and between 16 and 18 years (transition out of the family). In an attempt to confirm Wikler's predictions regarding the cyclical nature of stress empirically, follow-up

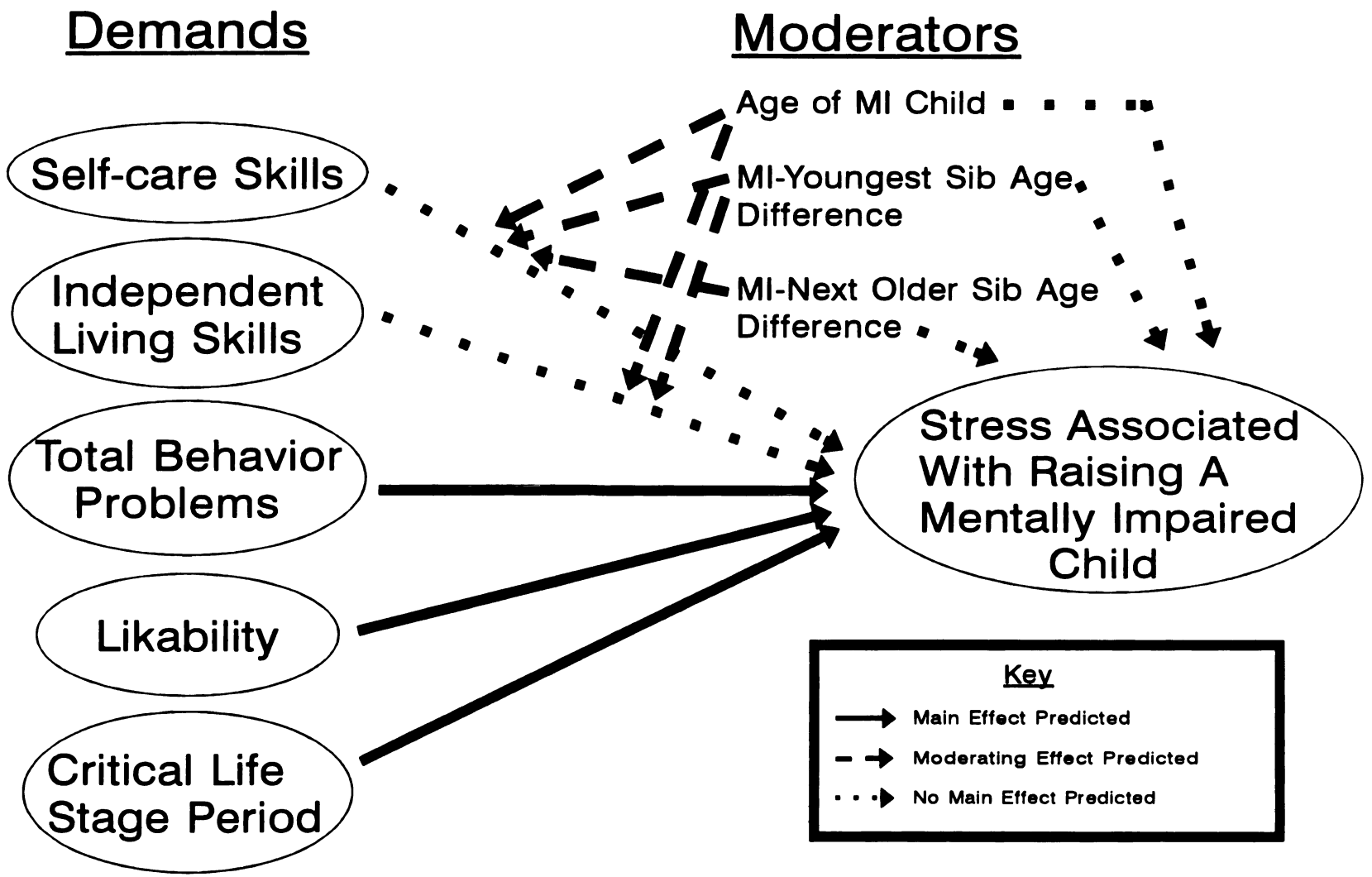

Figure 1.: Conceptual model of demands and stress with moderating variables

data will be utilized to examine changes in parent stress as certain families move into and others out of critical periods over time. A main effect of the age of the impaired child is not expected.

2) High levels of total child behavior problems are expected to be strongly predictive of stress independent of the age of the child, the number and ages of siblings, whether the child is currently in the midst of a critical period, or any other child characteristics. In spite of the fact that higher levels of total behavior problems are normative for an adolescent sample (Achenbach & Edelbrock, 1983), it is not anticipated that this fact makes the behavior any less stressful for parents who must deal with the actual consequences of the challenging behavior.

3) The "likability" of the child is expected to be the most powerful predictor of parent stress. The relationship between the child's likability and parent stress is expected to be independent of the age of the child, the number and ages of siblings, whether the child is currently in the midst of a critical period, or any other child characteristics. If parents are able to view their child as someone they like and enjoy being with, the gratification they receive in their role as parents may tend to minimize other concerns. Conversely, when a child is less likable and is unpleasant to be with, high levels of stress are predicted.

Predicted Interactions

4) Self-care skills

a) Poor self-care skills are hypothesized to be predictive of stress under certain conditions. First, the relationship between poor self-care skills and stress is expected to increase with the age of the mentally impaired child (Self-care skills X Age of mentally impaired child). Young impaired children who possess limited self-care skills are predicted to be less stressful than older impaired children of limited skill level since, in the current mild to moderately impaired sample, caretaking demands on parents of young children should not cause significant deviations from the expected parenting role. As the impaired child grows older, however, the need for similar levels of caretaking is much more likely to be inconsistent with the developmental role expectancies of the parent and, therefore, much more likely to lead to stress.

b) The presence of a younger, typically developing sibling is also expected to interact with the age of the mentally impaired child and the level of self-care skills to predict parent stress. When the mentally impaired child is young, the presence of a younger sibling is hypothesized to have a beneficial impact on parent stress since parents are still likely to be engaged in extensive caretaking of the younger sibling. The fact that similar caretaking is continuing with the impaired child may be perceived by parents as being less burdensome

since they are already engaging in this type of parenting behavior with the typically developing sibling. The greater the age discrepancy between the impaired child and the youngest nonimpaired sibling, the more pronounced this protective effect is hypothesized to be. A self-care skills X youngest sibling-mentally impaired child age difference interaction is, therefore, predicted.

c) When the mentally impaired child grows older and there is a younger sibling in the home, the degree to which the youngest typically developing sibling has a protective effect is also expected to depend on the age difference between the impaired child and the youngest child in the family. As the impaired child grows older, younger, typically developing siblings acquire new self-care skills at a faster rate than their impaired older sibling. The ability of a younger sibling to demonstrate an increasing ability to care for himself or herself may allow the sibling to overtake the impaired child and may highlight for parents that their impaired child will never achieve similar levels of functioning, exacerbating stress which they may experience. Therefore, the greater the age difference between the impaired child and the youngest sibling, the less likely it will be that the youngest sibling has overtaken the impaired child and the less stress that will likely result. Once again, a self-care skills X youngest sibling-mentally impaired child age difference interaction is, therefore, predicted.

d) The presence of an older sibling is also predicted to have an impact on parent stress resulting from poor self-care skills. When the impaired child is young, parents are expected to derive some benefit from having previously parented an older typically developing child since the caretaking demands of young impaired children in the current sample should not differ significantly from the demands presented by typically developing children. While the impaired child is still young, the greater the difference in age between the impaired child and the next older sibling, the more beneficial the previous parenting experience is expected to be since parents are likely to have derived parenting knowledge from their previous experience yet they have less of a need to balance the additional demands presented by the older child when the older child can function more independently (Self-care skills X Next older sibling-mentally impaired child age difference).

5. Independent Living Skills

a) Limited independent living skills are also hypothesized to be predictive of stress under certain conditions. The relationship between limited independent living skills and stress is, again, expected to increase with the age of the mentally impaired child (Independent living skills X Age of mentally impaired child). Young impaired children who possess poor independent living skills are predicted to be less stressful than older impaired children of similar skill level

since young children who have poor independent living skills should not cause significant deviations from the expected parenting role, regardless of developmental status. As the impaired child grows older, however, the inability of the child to take on more personal responsibility as he or she begins to negotiate the transition through adolescence and out of the home is much more likely to be inconsistent with the developmental role expectancies of the parent and, therefore, much more likely to lead to stress.

b) When there is a younger sibling in the family, as the mentally impaired child grows older and begins to reach the ceiling for his or her acquisition of independent living skills, the typically developing youngest sibling is likely to overtake the impaired child in acquiring the skills which will be necessary to live independently. When considering only those impaired children who are more likely to have reached their functional ceiling, the likelihood of a younger sibling overtaking the impaired child decreases with the increasing age discrepancy between the impaired child and the youngest sibling and, therefore, the less likely that stress will be exacerbated (Independent living skills X Youngest sibling-mentally impaired child age difference).

Chapter 5

METHODS

Subjects

Subjects in the current investigation were drawn from an initial sample of 171 families with a mentally impaired child participating in a larger ongoing longitudinal study examining adaptation in families with mentally retarded children. Characteristics of the current sample are summarized in Table 1. The larger study also includes comparison groups of behavior disordered, chronically ill, and typically developing children at various stages. While some recent work has suggested that families of children with handicaps exhibit variability comparable to the general population with respect to outcomes such as parenting stress (Gowen, Johnson-Martin, Goldman, & Appelbaum, 1989), family functioning (Frey, Greenberg, & Fewell, 1989), and marital satisfaction (Kazak & Marvin, 1984), for the present investigation only subjects with an impaired child were included. The goal of the current research was not to identify processes which are unique to families with an impaired child but rather to explain what actually is occurring in those families adapting to a child with a disability. As a practical consideration, even if one wanted to make comparisons with parents of typically developing children in this sample, since the primary stress measure included in this study was specifically designed for families with an impaired

Table 1

Selected Demographic Characteristics of the Sample

	Total Sample (n=171)	
	M	(SD)
Age of MR Child (years)	11.44	(3.44)
Age of Parent (years)		
Mother (n=171)	36.56	(7.07)
Father (n=146)	39.23	(7.47)
Annual Family Income ($1,000's)	26.48	(19.67)
Education Level (n)		
Father		
Did Not Complete High School		26 (18%)
High School Graduate		46 (32%)
Some College Completed		47 (32%)
College Graduate		27 (18%)
Mother		
Did Not Complete High School		24 (14%)
High School Graduate		66 (39%)
Some College Completed		60 (35%)
College Graduate		21 (12%)
Race (n)		
Father		
White		118 (81%)
Black		15 (10%)
Other		13 (9%)
Mother		
White		121 (71%)
Black		34 (20%)
Other		16 (9%)
Child's Gender (n)		
Male		86 (50%)
Female		85 (50%)
Child's Classification (n)		
Educable Mentally Impaired (EMI)		115 (67%)
Trainable Mentally Impaired (TMI)		56 (33%)
Family Composition (n)		
MR Child is Only Child		18 (11%)
MR Child is Oldest Child		67 (39%)
MR Child is Youngest Child		49 (29%)
MR Child is Middle Child		37 (21%)

child, many items are not appropriate for typically developing children and the measure, therefore, was not administered to these families.

A full range of SES and family compositions are represented in the current sample. Families were recruited through school districts in rural and urban settings, and by working with community groups and service organizations within an 80-mile radius of the university. The sample includes 115 children enrolled in Educable Mentally Impaired (EMI) classes and 56 children enrolled in Trainable Mentally Impaired (TMI) classes. These classroom placements roughly correspond to mild and moderate levels of mental retardation. Male and female impaired children are equally represented across the age groups. Sibling constellations consisted of 18 families where the mentally impaired child is an only child, 67 families where the impaired child is the oldest, 49 families where the impaired child is the youngest, and 38 families where the impaired child is a middle child.

Procedures

Subjects completed a battery of questionnaires and several videotaped interaction procedures during two interviews conducted in the families' homes. Families were paid $50 for their participation. After completing informed consent procedures, families signed releases so that information about child functioning could be obtained from schools. Teachers then were asked to complete several

additional measures. By convention, mothers alone were asked to complete instruments which assessed child functioning. Of the entire battery of questionnaires administered, the following were included in the current analyses:

Measures of child demands. AAMD Adaptive Behavior Scale for Children and Adults, 1974 Revision (Nihira et al., 1974): this 110-item questionnaire completed by mothers with respect to their impaired child is a widely used instrument designed to assess 10 domains of adaptive functioning and 14 domains of maladaptive behavior. The instrument is intended for use with both children and adults with mental impairment. For the current investigation items drawn from several adaptive behavior subscales, were utilized to provide measures of a child's self-care skills and a child's independent living skills. For the self-care skills scale, items from subscales 1A through 1F served as a measure of the child's ability to engage in a variety of everyday routines (e.g. feeding, dressing, toileting, bathing, etc.). For the independent living scale, items from subscales 1H, 3, 5, 6, 7, 8, and 9 served as a measure of the child's readiness to function independently outside of the home (e.g the child's ability to handle money, purchase items from a store, prepare meals, etc.). After raw scores were obtained for both the self-care skills and independent living scales, age corrected scores were calculated by generating a separate t-score for each

age level in the sample.

Achenbach Child Behavior Checklist (Parent version) (Achenbach & Edelbrock, 1983): Completed by mothers in the sample, this questionnaire contains 113 items designed to assess a broad range of psychopathology in children. This factor-analytically derived scale is among the most widely used instruments for studying behavior problems in children. It has demonstrated excellent validity and reliability. Age-corrected standardized t-scores on the total behavior problems subscale of the checklist served as a broad measure of child psychopathology for the current analyses.

Questionnaire on Resources and Stress (QRS) (Holroyd, 1974): was completed by both mothers and fathers to evaluate the problems they experience caring for a child with a handicap. The long form of this questionnaire has 285 true-false items and includes 15 factor analytically derived scales which group into three general domains of parent stress, family stress, and child related stress. While the instrument has satisfactory reliability and it remains the most widely used measure of the parents experience of caring for an impaired child, as has been discussed, the QRS scales have been criticized for being a heterogeneous mix of items which assess demands, stress, and strain.

As a means of addressing this criticism, items on the QRS were classified

as either demand items, stress items, strain items, or "unrelated" items utilizing the following decision rule. To be classified as a measure of a demand, an item needed to mention some characteristic of or behavior resulting from living with the child **without** any kind of positive or negative emotional consequences for the parent or family **necessarily** stemming from the child's behavior or the parental behavior which stems from it. For example, the item "_____ 's needs come first" would be classified as a demand item because while an aspect of child functioning is represented, there are no necessary emotional repercussions for what is being described. Parents are not necessarily stressed by the fact that a child's needs are placed before their own. To be classified as a stress item, an item needed to represent some aspect of child functioning or a behavior resulting from living with the child **and** have some positive or negative repercussions necessarily associated with it. An example of a stress item would be: "The constant demands to care for _____ limit my growth and development," since there are necessary emotional ramifications associated with the child. Those items which contained evidence of emotional or some other type of burden experienced by a family member but made no connection of the emotion experienced to the child were classified as strain items. "It is easy for me to relax," is one such example of a item which measures strain. Finally, those items which were neither associated with the child nor had necessary

emotional consequences for family members attached to them were classified as "unrelated." "Our relatives have been very helpful," provides an example of one such item.

Items from each of the subscales to be included were rated independently by 3 psychology graduate students trained on the criteria for classifying items described above. In order to establish some measure of reliability for the rating criteria, Cohen's Kappa was calculated for each of the three pairs and the Kappa scores attained ranged from .82 to .89.

As a means of assessing the "likability" of the child, several items were selected from among those items on Scale 15 which seem to be assessing demands. Items 1, 11, 30, 115, 123, 145, 147, 172, 179, 184, 189, 198, 205, 207, 220, 221, 225, 232, 246, 259, 262, 267, 281 were included for the analyses. The scale now only includes such demand items as "_____ appreciates the interest others show in him or her" and "_____ is very irritable." Reliability for this new scale was quite good and the inclusion of only demand items seems to offer substantial improvements in discriminant validity. For mothers' report on the scale, alpha for the "pure" demand scale was calculated at .80 compared to an alpha of .82 for the original scale. For fathers' report on the scale, alpha for the "pure" demand scale was calculated at .78 compared to an alpha of .79 for the original scale. Notably, these alpha

coefficients were maintained in spite of having reduced the length of the scale from 32 to 23 items. Utilizing the entire sample of 171 impaired children, raw scores on the likability scale were first converted to separate sets of t-scores for mothers' report and for fathers' report of the child's likability before being included in any analyses.

Measure of stress. Questionnaire on Resources and Stress (QRS) (Holroyd, 1974): was again utilized. Using the procedure described above, stress items from the following 4 scales have been combined to form a single heterogeneous measure of stress: Scale 2. Excess time demands, Scale 3. Negative attitude toward index case, Scale 7. Pessimism, and Scale 8. Lack of family integration. Specific stress items which were included on the single stress scale are as follows:

Scale 2: 60, 218, 224, 226, 274

Scale 3: 15, 35, 37, 38, 43, 98, 105, 106, 129, 142, 159, 166, 173, 185, 191, 217, 266

Scale 7: 51, 59, 66, 114, 202, 206, 211

Scale 8: 33, 47, 56, 118, 120, 125, 130, 141

The single stress scale which has been constructed still demonstrates good reliability and, again, seems to offer substantial improvement in discriminant validity. For mothers, alpha for the "pure" stress scale was

calculated at .75 compared to an alpha of .84 when the four original scales were combined. This reliability was obtained in spite of the fact that, in dropping the demand and strain items, the scale length was reduced dramatically from 73 to 37 items. For fathers, alpha for the "pure" stress scale was also quite high, calculated at .78 compared to an alpha of .87 when the four original scales were combined. Calculated raw scores on the stress scale were again transformed into separate sets of t-scores for mothers' and for fathers' reported stress before being included in the analyses.

Chapter 6

RESULTS

Prior to conducting the analyses necessary to test each of the hypotheses, a series of analyses were carried out to examine any potential relationship between the demographic variables listed in Table 1 and parent stress. This was done in order to explore the possibility that these exogenous variables might account for any significant relationships which might be found. A series of separate regression analyses were conducted utilizing each of the demographic variables to predict parent stress. No significant relationship was found for any of the demographic variables, which were then excluded from subsequent analyses. Consistent with the predictions, there was no significant relationship found between the child's classification (EMI vs.TMI) and parent stress. Descriptive statististics for each of the continuous variables which were included in subsequent regression analyses are listed in Table 2.

A series of hierarchical regression analyses were then conducted to test each of the hypotheses, the results of which are summarized in Table 3. To test hypothesis number one, which states that impaired children who are in the midst of a developmental transition should produce more stress for their parents, critical life stage period was coded as a categorical dummy variable and entered into a regression equation to predict parent stress, utilizing the separate

Table 2

Descriptive Statistics for Continuous Regression Variables

	Total Sample (n=171)	
	M	(SD)
Child's Self-care Skils (raw score)	68.26	12.15
Child's Independent Living Skills (raw score)	45.51	17.59
Total Child Behavior Problems (T-score)	62.76	10.21
Child's Likability (raw score)		
Mother rating	13.62	2.22
Father rating	12.92	2.18
Total Stress (raw score)		
Mother report	16.77	3.77
Father report	16.86	3.51

Table 2

Summary of Hierarchical Regression Analyses for Variables Predicting Parent Stress

	Mother Stress		Father Stress	
	ΔR^2	ΔF	ΔR^2	ΔF
Critical Period	.00	.57	.01	1.69
Total Behavior Problems	.00	.18	.00	.12
Likability	.05	9.01**	.03	5.89**
Age				
Self-Care Skills	.02	1.27	.05	4.44**
Age X Self-Care Skills	.01	.93	.00	.31
MR-Youngest Sib. Age Difference				
Self-Care Skills	.01	.37	.03	1.36
MR-Youngest Sib. Age Difference X Self-Care Skills	.00	.01	.01	.69
Next Oldest Sib.-MR Age Difference				
Self-Care Skills	.10	1.87	.03	.58
Next Oldest Sib.-MR Age Difference X Self-Care Skills	.00	.08	.10	3.88*
Age				
Independent Living Skills	.01	1.15	.02	1.84
Age X Independent Living Skills	.02	2.87	.01	1.17
MR-Youngest Sib. Age Difference				
Independent Living Skills	.02	.34	.06	1.42
MR-Youngest Sib. Age Difference X Independent Living Skills	.04	1.60	.00	.05

*p<.05. **p<.01.

standardized stress scores derived from the QRS for both mothers and fathers. The results indicated no significant predictive relationship between critical period and either mothers' stress (ΔR^2 =.00, ΔF=.57) or fathers' stress (ΔR^2 =.01, ΔF=1.69). Similarly, in testing hypothesis number two, which predicted a positive relationship between child behavior problems and parent stress, when the total behavior problem t-score was entered into a regression equation no significant relationship with parent stress was found (ΔR^2 =.00, ΔF=.18, for mothers; ΔR^2 =.00; ΔF=.12, for fathers).

In order to test hypothesis number three, which stated that the child's likability score would be a significant predictor of parent stress, standardized t-scores derived from parent ratings of the impaired child's likability were entered into regression equations. The child's likability is the only predictor variable for which father ratings were available. For this reason, fathers' ratings of the child's likability were able to be used to predict paternal stress while mothers' ratings of likability were used to predict maternal stress. The results revealed a significant relationship between the child's likability and parent stress for both mothers (ΔR^2 =.05, ΔF=9.01, p<.01) and fathers (ΔR^2 =.03, ΔF=5.89, p<.01).

To test hypothesis 4a, where the relationship of the impaired child's self-care skills to stress is predicted to increase with the age of the child, age-corrected and standardized t-scores from the self-care skills scale was entered

as the first step in a hierarchical regression equation simultaneously with the standardized age of the mentally impaired child. Age-corrected scores on the self-care skills scale were utilized since within age differences were expected to increase with the age of the child. The results indicated a significant relationship between this first step and paternal stress (ΔR^2 =.05, ΔF=4.44, p<.01) but not maternal stress (ΔR^2 =.02, ΔF=1.27). Closer inspection of the beta weights for this first step indicated that much of the relationship between this first block and paternal stress was explained by the self-care skills predictor variable alone. Indeed, there was a significant main effect of self-care skills on fathers' stress (Beta=-.21, T=-2.74, p<.01). In the next step, an age X self-care skills interaction term was entered into the equation. The interaction term explained an insignificant amount of additional variance in parent stress (ΔR^2 =.00, ΔF=.31, for fathers; ΔR^2 =.01, ΔF=.93, for mothers).

Hypotheses 4b and 4c make rather different theoretical predictions regarding the mechanisms through which the presence of a younger, nonimpaired sibling effects parent stress as the mentally impaired child grows older. In spite of these different conceptual predictions, the two hypotheses are similar in that, for each, the greater the difference in age between the impaired child and the youngest sibling, the more benefit parents are expected to derive from the presence of the sibling. For this reason, hypotheses 4b and 4c were

tested in the same statistical procedure. In calculating the age difference between the impaired child and the youngest sibling in the family, the youngest sibling's age (in months) was subtracted from the impaired child's age. In cases where the impaired child was an only child, this difference was calculated as zero since the absence of a younger sibling would tend to minimize any of the stress buffering effect which had been hypothesized. The resulting age difference scores were then converted to t-scores before being utilized for any analyses. Self-care skills scores and the youngest sibling-mentally impaired child difference score were entered simultaneously as the first step into a hierarchical regression equation. The results indicated no significant relationship between the self-care skills/age difference score block and stress for either mothers (ΔR^2 =.01, ΔF=.37) or fathers (ΔR^2 =.03, ΔF=1.36). In the next step, the self-care skills scores X youngest sibling-mentally impaired child difference score interaction term was entered into the regression equation. The interaction term also predicted no additional significant variance for either parent stress score (ΔR^2 =.00, ΔF=.01, for mothers; ΔR^2 =.01, ΔF=.69, for fathers).

To test hypothesis 4d, which predicts that the presence of an older sibling will ameliorate parent stress when the impaired child is young, the benefit increasing with increasing age difference, the sample was divided roughly in half by the age of the mentally impaired child. Children 10 years of age and younger

were included in a young impaired child group while children 11 years of age and older were included in an older impaired child group. Age-corrected scores on the self-care skills scale were simultaneously entered as the first step of a hierarchical regression equation with the next older sibling-impaired child age difference score utilizing only families from the younger impaired child group. Once again, in families where the impaired child was an only child, this difference was calculated as zero. The age difference score was restandardized using only the younger impaired child group so as to accentuate any within group differences. Results of the first step of the analysis indicated no significant predictive relationship with parent stress (ΔR^2 =.10, ΔF=1.87, for mothers; ΔR^2 =.03, ΔF=.58, for fathers). The self-care skills scale score X next older sibling-impaired child age difference score interaction term was then entered as the next step into the regression equation. Results indicated that the interaction term explained additional variance for fathers' stress (ΔR^2 =.10, ΔF=3.88, p<.05) but not for mothers' stress (ΔR^2 =.00, ΔF=.08).

A series of follow-up analyses were conducted in order to further explore the nature of this statistically significant interaction. A median split was utilized to divide the group into high and low age-difference subgroups. Separate bivariate Pearson correlations were then conducted between self-care skills and father stress for each of the groups. Self-care skills did not correlate

significantly with father's stress for either the high age difference group (r=-.21, n.s.) or the low age diference group (r=.28, n.s.), as had been predicted. The direction of the correlations, however, suggest very different effects for the two age difference subgroups.

To test hypothesis 5a, which predicts that limited independent living skills will be stressful only for parents of older children, age-corrected and standardized t-scores for the independent living skills scale were simultaneously entered as the first step into a hierarchical regression equation with the age of the mentally impaired child. Once again, age-corrected scores were utilized since it was hypothesized that older impaired children with limited independent living skills would be more stressful for parents in comparison to more skilled impaired children of the same age. Results of the first step of the analysis indicated no significant predictive relationship with parent stress (ΔR^2 =.01, ΔF=1.15, for mothers; ΔR^2 =.02, ΔF=1.84, for fathers). The age X independent living skills interaction term was then entered as the next step into the regression equation. Results indicated that the interaction term explained no significant additional variance in parent stress (ΔR^2 =.02, ΔF=2.87, for mothers; ΔR^2 =.01, ΔF=1.17, for fathers).

Finally, to test hypothesis 5b, where the likelihood that a younger sibling will exacerbate stress by surpassing the impaired child is predicted to decrease

as the age difference between siblings increases, the older impaired child age group was utilized since this is the only group for which significant effects of independent living skills are predicted. As was done earlier for analyses involving the younger impaired group, the age difference score was restandardized using only the older impaired child group so as to accentuate any within group differences. Age difference scores for only children were, again, calculated as zero. The age-corrected independent living skills score was then simultaneously entered as the first step into a hierarchical regression equation with the recalculated standardized t-score for the youngest sibling-mentally impaired child difference. Results of the first step of the analysis again indicated no significant predictive relationship with parent stress (ΔR^2 =.02, ΔF=.34, for mothers; ΔR^2 =.06, ΔF=1.42, for fathers). The youngest sibling-mentally impaired child difference score X independent living skills score interaction term was then entered as the next step into the regression equation. Results again indicated that the interaction term explained no significant additional variance in parent stress (ΔR^2 =.04, ΔF=1.60, for mothers; ΔR^2 =.00, ΔF=.05, for fathers).

Chapter 7

DISCUSSION

Significant Findings

While disappointing, the results of the current investigation confirmed much of the previous research which has tended to point to the limited importance of child characteristics for predicting parent stress, especially when mediating variables such as marital quality (Floyd & Zmich, 1991) and social support (Dunst, Trivette, & Cross, 1986; Greenberg & Crnic, 1988) are considered. In spite of these findings, several significant results did emerge from the current investigation which are worthy of further discussion.

Contrary to earlier predictions, age-corrected scores on the self-care skills variable was a significant predictor of stress for fathers in the sample. Interestingly, no significant relationship was found between self-care skills and maternal stress. Hypothesis 4a predicted that variability in self-care skills would be predictive of stress only for parents of older children. It was hypothesized that since parents of younger children, to a certain extent, "expect" to be engaged in a significant amount of caretaking, the fact that an impaired child presented additional demands would be relatively unimportant for parents early on in the child's life. The results of the current investigation suggest that those impaired children who demonstrate limited self-care skills, relative to impaired

children of the same age, have fathers who tend to perceive such limitations as stressors regardless of the child's age.

The fact that fathers alone would be affected by limitations in self-care skills is particularly surprising given the work of Baldwin (1976) and Parke (1986) which suggests that fathers of impaired children tend to disengage from caretaking roles. One possibility that results of the current investigation suggest is that if fathers do indeed disengage from caretaking responsibilities, it may very well be in reaction to increased stress associated with duties they perceive as burdensome. Perhaps the kind of disengagement which Baldwin and Parke have identified speaks more to the absence of actual physical duties carried out by fathers rather than to the absence of emotional pain which fathers may still experience with respect to the limitations of their impaired child. If a father of an impaired child with limited self-care skills tends to take on less caretaking responsibilities, it may suggest a coping strategy fathers use for dealing with increased stress; a strategy about which mothers of impaired children may not be particularly appreciative.

Interestingly, mothers in the current sample appear to be relatively unaffected by differences in their child's self-care skills in spite of the fact that mothers may be doing the majority of the caretaking. It may well be that mothers in the current sample are both more accepting of their child's differences as well

as of their role as the adult who will need to take on the greater burden of caring for their impaired child. Perhaps the old adage that mothers tend to love their children unconditionally is particularly applicable to the current sample.

It is, perhaps, somewhat surprising that limited self-care skills seems to directly affect only fathers in the sample when mothers are the ones who typically take on the majority of the caretaking. One possibility which may be worthwhile to explore in future research is that an impaired child's limited self-care skills increases fathers stress indirectly, by limiting mothers availability in the marital relationship. Consistent with Lazarus and Folkman's understanding of appraisal processes, mothers of impaired children simply may not perceive the extra demands placed on their time by a child with limited self-care skills as being stressful. As was discussed earlier, perhaps caring for their impaired child is perceived by mothers as being no different from caring for any other child regardless of the child's developmental status.

The results also offer preliminary support for hypothesis 3, where parents' ratings of a child's likability was found to be strongly predictive of stress for both mothers and fathers in the current sample. This result is perhaps not at all surprising. Parents who, in general, tend to perceive their children in more positive ways would seem much less likely to be stressed by other aspects of the child's functioning which are perhaps less desirable.

Although the results indicate a statistically significant interaction, follow-up analyses revealed that Hypothesis 4d, which predicted that the presence of an older sibling would ameliorate parent stress in families with young impaired children as the age difference between the impaired child and the next older sibling increased, was not confirmed for fathers in the current sample. In those cases where there was a young impaired child with an older sibling, a larger age difference between the siblings revealed a negative (although not significant) relationship between self-care skills and fathers' stress, as had been expected. For the small age difference group, however, rather than the relationship between poor self-care skills and stress intensifying, as had been hypothesized, just the opposite occurs. Contray to earlier predictions, lower self-care skills seems to be associated with less stress (although again, not signifcantly so) for this subsample.

One possibility for this significant finding, then, may be that an older sibling may play a protective function for fathers when the older sibling's self-care skills are more simillar to those of the impaired child: when the siblings are closer to each other in age. This conclusion is consistent with family life cycle theory which might suggest that rather than being burdened by additional caretaking demands from a child who is close in age to the imapired child, fathers should experience some stress reduction. The presence of a

nonimpaired child of similar age is more consistent with family developmental expectancies regarding caretaking roles. Nontheless, the fact that an impaired child with better self-care skills produces more stress for fathers when there is an older sibling closer in age is difficult to fully explain and may well be a statistical artifact.

Limitations of the Study

The current study presents several major limitations. First, conclusions drawn regarding the degree to which the child's likability (or absence thereof) is predictive of parent stress must be regarded as preliminary, at best. While measures of likability and parent stress are derived from different subscales, both were drawn from the same instrument, the Questionnaire on Resources and Stress. For this reason, the significant results may well be attributable to shared method error. Results would need to be replicated using independent measures of the child's likability and parent stress before firm conclusions regarding this relationship can be drawn.

Several additional methodological problems may well have contributed to some of the insignificant results. For both hypothesis 4c and 5b, it was hypothesized that when a younger sibling overtakes the impaired child, parent stress was likely to increase. Unfortunately, given the limitations of cross-sectional data, there was no accurate way to assess when this event occurred, if

at all, for families in this study. Instead, an attempt was made to evaluate the likelihood that a younger sibling had surpassed the impaired child by inferring that this event was more likely to have occurred when the age difference between the siblings were smallest. While this may be a reasonable assumption, in conducting the analyses in this way, one also assumes that the relationship between stress and the age difference is a linear one when, in fact, the relationship is likely to be nonlinear. It seems plausible that families experience heightened stress shortly before and for some time after a younger sibling overtakes the impaired child, with the stress that stems from this event, ultimately fading. Without a more accurate means of assessing when the event of a sibling overtaking the impaired child has actually occurred, it becomes difficult to study this phenomena with the necessary precision.

While not a major limitation because it was not a frequent occurrence, there are some idiosyncracies of the Adaptive Behavior Scale that were likely to mask what were true differences between impaired children. In attempting only to score a child on behaviors which they have the opportunity to display, it is possible for a child to achieve the maximum score on an item not only when they can successfully perform the task that is described but also when they are not required to do so. Importantly, a child can receive the maximum score for an item even when they are not able to successfully perform the task that is

described. The result is that for a limited number of items, the highest functioning children in the sample received an identical score to those who were very likely the lowest functioning in the sample. Unfortunately, since it was not possible to drop these items from the analyses, in some cases, true differences between children were partially obscured.

Perhaps the most serious methodological limitation may lie in the use of the QRS itself. While attempts were made to "purify" the scale by retaining only demand items for the likability scale and only stress items for the combined stress scale, the construct validity of these scales could not be established since no other measure of stress was available. This was a perhaps a necessary sacrifice in attempting to improve the discriminant validity of the scales. Perhaps the most surprising finding of the study, in fact, was that no significant relationship was found between total child behavior problems and parent stress. At best, the QRS stress scale which was contructed for the current investigation may be a valid measure of a heterogeneous mixture of stresses. Unfortunately, the cost of heterogeneity may well have been a loss of specificity. Without the availability of an alternative measure of stress, this is a question that the current investigation is unable to answer.

As is the case for any study which relies solely on cross-sectional data, conclusions regarding the causal nature of the relationships must also be viewed

as preliminary. It may well be possible, for example, that parents who are experiencing a great deal of stress may tend to perceive their child as less likable than do parents who are experiencing less stress. Predictions in the opposite direction for the other two significant findings seem much less plausible, however. It seems rather unlikely that high levels of paternal stress might lead a mother to report limitations in her child's self-care skills. Even more implausible, is that paternal stress in some way caused the age difference X self-care skills interaction that was predicted in hypothesis 4d.

One must also be cautious regarding the generalizability of the current investigation. The study sought to identify predictors of stress solely in families with a child with mild to moderate impairment. The demands presented by impaired children with more severe difficulties and the adaptational processes at work in these families may be quite different. The sample for this study was largely Caucasian and caution should be exercised about applying the results of the study to other ethnic groups.

While the importance of mediating variables such as marital quality and social support have already been mentioned, this study did not attempt to assess either of these variables. Unfortunately, given the various family compositions which were of primary focus for this study, the sample size was insufficient to study these mediating variables while maintaining adequate

statistical power. Any replication of this study should, perhaps, attempt to incorporate social support and marital quality variables into the analyses if the size of the sample will so allow.

General Conclusions

While the results have been disappointing, the current study had been among the first to attempt to apply family developmental considerations to understand the impact of child characteristics on family functioning. Because of some of the measurement problems that have been discussed above, it is perhaps too early to conclude that family life cycle considerations have little impact on parent stress. Indeed, further work should attempt to utilize both domain specific as well as more general measures of stress so that the potential impact of child characteristics can be better understood in the context of family developmental theory.

The current investigation has attempted to understand the family's adaptation to the presence of a mentally impaired child in a manner that treats the family as a complex developmental entity. While few significant results have emerged, the methodological problems which have been discussed suggest that it may be premature to conclude that family variables are unimportant in understanding how child characteristics influence parents. Indeed, the main findings are rather consistent with previous research that has suggested that the

size of any child effects are small in comparison to some of the mediating variables which have already been discussed. Perhaps the most general conclusion that may be drawn from the current investigation, then, is that in attempting to assess how child characteristics will affect the family, the obvious place to look may not always be the best.

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