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THE INFLUENCE OF SOCIAL SUPPORT ON THE STRESS LEVEL
OF PARENTS WITH DISABLED CHILDREN

by

Shannon J. Pratt

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

UTAH STATE UNIVERSITY
Logan, Utah

1992

ACKNOWLEDGEMENTS

I would like to thank Dr. Karl White for making available to me the Early Intervention Research Institute's (EIRI) data set for the research in this thesis (contract #300-85-0173). I would especially like to thank my committee members, Drs. Richard Roberts, Keith Checketts, and Lani Van Dusen, for their support and assistance throughout the entire process.

I give a special thanks to my family, friends, and colleagues for their encouragement, moral support, and patience as I worked my way from the initial proposal writing to this final document. I could not have done it without all of you.

Shannon J. Pratt

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ABSTRACT

The Influence of Social Support on the Stress Level
of Parents with Disabled Children

by

Shannon J. Pratt, Master of Science
Utah State University, 1992

Major Professor: Dr. Richard N. Roberts
Department: Psychology

This study investigated the relationship between social support and stress in 572 families of disabled children in various parts of the United States. To utilize multidimensional models such as Dunst's ecological model and the Double ABCX model of stress, additional variables were investigated; these included family characteristics and recent life events (FILE). A regression design was used, with family characteristics, recent life events (FILE), perceived helpfulness of social support (FSS), and perceived adequacy of resources (FRS) as independent variables, and parental stress (PSI) as the dependent variable (PSI). Helpfulness of social support, recent life events, and family characteristics all predicted parental stress, though only to a very small extent. Perceived adequacy of resources was by far the most significant predictor, accounting for 21% of the total variance in the highest predicting equation. Discussion focuses on perceived family needs and resources within cooperative interventions.

(75 pages)

CHAPTER I
INTRODUCTION

Problem Statement

The idea that one's social contacts help with the coping of stressful events makes intuitive sense--Who has not felt the safety of a trusting friend on whom one can call in time of need? This deduction, however, goes beyond common insight. Cassel (1974), Caplan (1974), and Cobb (1976) set forth important hypotheses about social contact, or "social support" (MacElveen-Hoehn & Eyres, 1984). These authors suggest positive connections between the mental and physical health of an individual and his or her social environment. It seems that an effective social support system may act as a buffering or protective agent in the reaction to "stress" (MacElveen-Hoehn & Eyres, 1984). This hypothesis has been applied to a variety of situations and is supported by much research (see Schwarzer & Leppin, 1989).

One particular situation of interest is that of a family caring for a disabled child. Dunst and Trivette (1988) convincingly display the connection between social support and a family's level of health, coping, and functioning. Following Brofenbrenner's (1979) ecological model of social influence, they suggest that the most effective interventions should "empower" families to utilize their social resources. Patterson and McCubbin (1983) address the influence of social support in families with a chronically ill child. They list "maintaining social support, self esteem, and psychological stability" (p. 32) as a primary coping mechanism in dealing with stressors

associated with a disabled child. Interventions, they propose, should be problem-solving focused and should help individuals to competently gain and use social connections.

It is worthy to look at social support in the study of, and intervention of, stressful events associated with a disabled child. A problem, however, is that much research and application are yet to be done. The clear definition and quality measurement of "social support" have been characterized as elusive (DiMatteo & Hays, 1981). Dunst and Trivette (1988) point out that much early intervention has failed to utilize social systems in focusing too narrowly on the child. Gottlieb (1981) has noted a deficit in "action research." Finally, longitudinal and replicated studies in this area are not common.

In sum, specific, sound, and applied research is needed to confirm hypotheses in regard to social support and its effect on families of children with disabilities.

CHAPTER II
LITERATURE REVIEW

Individual and Family Stress

A family's reaction to difficult life situations may be understood within the context of stress theory. Though these theories recognize at least three dimensions of stress, or anxiety--physiological, behavioral, and cognitive (Michelson & Ascher, 1987)--the latter has recently received special attention. Using a cognitive approach, Lazarus and Folkman (1984) define stress as the "relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). Paired with this are coping efforts, defined as

constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person.
(p. 141)

These perceptions of stress and coping can apply to the family as well as an individual.

The Double ABCX model (Figley & McCubbin, 1983; McCubbin & Patterson, 1983a) provides a conceptualization of the recurring crises, and the subsequent attempts at coping, which a family of a disabled child might experience. Within this model, a stressor is defined as a "life event or transition impacting upon the family unit which produces, or has the potential of producing change in the family social system" (McCubbin & Patterson, 1983a, p. 86). This factor interacts with the family's resources for, and perceptions of, the stressor, to determine stress level. "Demand-capability imbalance" may in turn lead

to a crisis if it cannot be resolved and if systemic change occurs. This crisis is characterized by an inability to restore stability and by continuous pressure to make changes in family structure and patterns of interaction. A modified version of the Double ABCX model, used for this study's purposes, is presented in Figure 1.

Coping is the method by which a crisis may be resolved and is aimed at adaptation and balance restoration. This is influenced by family resources and family perceptions. The former are defined as:

The psychological, social, interpersonal and material characteristics of individual family members (e.g., ability to earn an income), of the family unit (e.g., flexibility, organization), and of the community (e.g., medical services, support groups) which are used to meet family demands and needs. (Figley & McCubbin, 1983, p. 29)

The latter involves the construed meaning of original stressor, of the crisis, of the "pile up" of stressor demands, and of existing and newly forming resources.

The Effects of Stress in Families

In reference to this model, the family, in particular the parents, of a disabled child may experience many crises. The demands that confront them, beginning at the child's birth, are excessive compared to other families, and likewise they may incur significant changes in family functioning. In addition, these crises may be cyclical, appearing as discrepancies emerge between expectations and realizations of their child's development (Wikler, 1981). Thus, parents may be chronically reminded of, and must continually adjust to, the extra strain and absence of normality which their child represents (Ellis, 1989; Vadasy, Fewell, Meyer, & Greenberg, 1985).

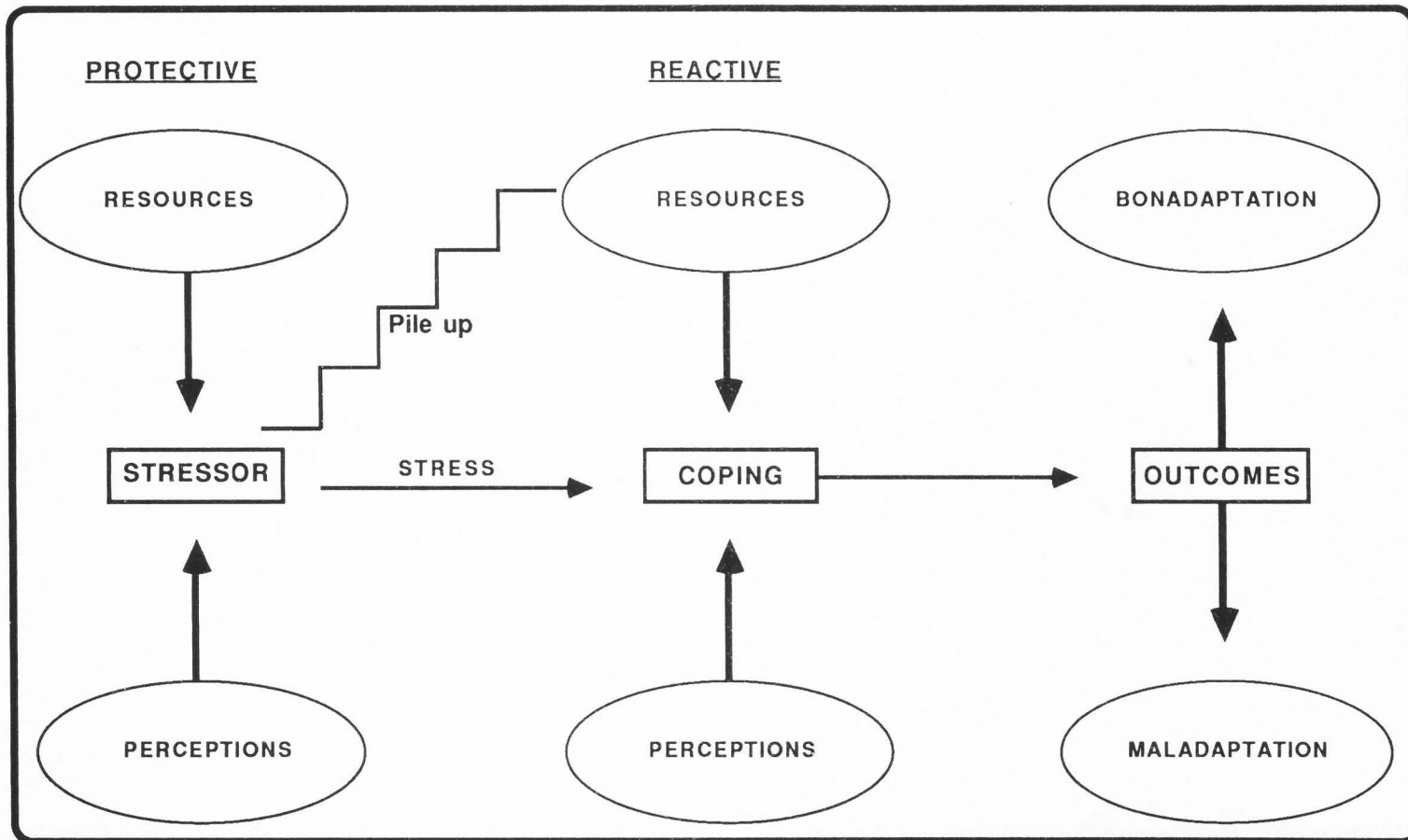


Figure 1. Modification of the double ABCX model of stress.

While these disruptions are effectively avoided or dealt with by many parents (e.g., Hampson, Hulgers, Beavers, & Beavers, 1988), they are often not by others. The constant tussling with stressors associated with the child's care, and the simultaneous struggling to maintain a positive parenting identity, are often too much for the parent. Thus, these individuals are placed at higher risks for feelings of depression, doubts about competence (Kazak & Marvin, 1984), strained child relationships (Wolf, Noh, Fishman, & Speechley, 1989), lowered self esteem, lower energy, and social isolation (Breslau, Starch, & Mortimer, 1982; Cummings, 1976). They may also display lowered adjustment, higher psychological distress (Gayton, Friedman, Tavormina, & Tucker, 1977), and such feelings as disappointment, blame (Lowenthal, 1987), ambivalence, denial, guilt, shame, and fear (Price-Bonham & Addison, 1978; Ryan & Smith, 1989).

Support Defined

As suggested within the stress model, one factor which may mediate these outcomes is family resources. These may either serve to prevent stress from becoming a crisis, or to aid in restoring order once a crisis has developed. A particularly important resource is social support. Cobb (1976) classically defines this as "information leading the subject to believe" that s/he is cared for and loved, is esteemed and valued, and belongs to a "network of communication and mutual obligation" (p. 300). Another definition includes the

...emotional, psychological, physical, informational, instrumental, and material aid provided by others that influences the behavior of the recipient of the help and assistance. (Dunst & Trivette, 1988, p. 134)

In addition, this aid may come from at least three levels of sources. The first level consists of the most enduring and immediate sources of support and may include nuclear family members, close friends, relatives, and significant others. The second level consists of less intimate yet regularly contacted individuals such as neighbors, acquaintances, distant relatives, and some service professionals. Finally, the third level consists of infrequently contacted, nonintimate sources of support such as paid professionals, businesses, or institutions (Schilling, Gilchrist, & Schinke, 1984; Unger & Powell, 1980).

The Role of Perception

These descriptions of social support may be linked to the idea of "cognitive appraisal" (Lazarus & Folkman, 1984). This notion appoints the individual's perception of situational variables (e.g., threat, resources) as paramount in dealing with stress. Thus, stress depends on whether something is perceived as threatening, which depends on whether resources are perceived as being available, which is tied to whether resources are perceived as being effective. Applied to social support, this view suggests that it is not the help per se, but the receiver's perception of help, in relieving perceived stress, which is crucial (Barrera, 1981; Humphrey, 1989). Many studies have confirmed this connection, directly or indirectly, and have noted the buffering effect of perceived social support on parents of disabled children.

Stress Bufferer in Handicapped Families

Perceptions of social support have been associated with increased coping (Schilling et al., 1984) and threat reduction (McNett, 1987) among parents of handicapped children. These perceptions may mitigate parental depression and feelings of incompetence (Gowen, Johnson-Martin, Goldman, & Appelbaum, 1989; Vadasy et al., 1985) among this population. Schilling et al. (1984) advocated focus of perceptions of social support in group interventions to reduce general family stress. Finally, Iscoe and Bordelon (1985) and Lutzer (1987) found perceptions of social support to increase feelings of self-esteem, of being understood, and of feeling "normal."

Studies Addressing Different Handicaps

This effect on parental stress and adaptation has been found for a wide variety of disabilities; mental retardation is one example. Support may be a factor in a family's positive adaptation to a disabled child (Glidden & Pursley, 1989). Some present it as a criterion of health and adaptation in families with a mentally retarded child (e.g., Hampson et al., 1988; Nihira, Meyers, & Mink, 1983). Brotherson et al. (1988) found parents' use of support systems to significantly correlate with perceptions of family functioning involving a mentally retarded adolescent.

Developmental delay and bad temperament have been studied. Cooley, Singer, and Irvin (1989) noted increased positive attitudes by parents to a family program assisting with developmentally delayed

children. Cutrona and Troutman (1986) found it to affect the level of postpartum depression in mothers of children with bad temperaments.

Many other types of disabilities have also been studied. Frey, Greenberg, and Fewell (1989) found social support to be highly predictive of family adjustment and paternal psychological distress among a group of parents with children having Down syndrome, cerebral palsy, multiple sensory handicaps, or William syndrome. Capuzzi (1989) found social support to affect maternal attachment in a group of mothers with children having orthopedic, visual, and mental handicaps, as well as cystic fibrosis, pulmonary dysplasia, and facial deformity. It can significantly predict physical and emotional health among parents of children with physical impairments (e.g., cerebral palsy, spina bifida), mental retardation (e.g., Down syndrome), and developmentally at-risk children (Dunst, Trivette, & Cross, 1986). It may lower the risk for child abuse (Kirkham, Schinke, Schilling, Meltzer, & Norelius, 1986), and may reduce feelings of social isolation (Telleen, Herzog, & Kilbane, 1989) in mothers of children with developmental delays.

Support Effects on Parent Stress

All of these studies, some more explicitly than others, address stress experienced with the child and with the parent's adaptation to the parenting role. For example, Wolf et al. (1989) examined stress within the "parent-child system." They found that the relationship between depressive symptoms and parenting stress could be significantly altered through social support. Petersen (1984) found that a family's

resources, including physical and emotional support and satisfaction with community services, had a significant buffering effect on the relationship between stressful events associated with the child, and the outcome measures of health and marital adjustment. Dunst et al. (1986), in studying the effects of social support on family outcome measures, found that social support could have a positive effect on parental attitudes, parent-child play opportunities, and child development and behavior. Friedrich, Wilturner, and Cohen (1985) found a lack of social support to be predictive of parental stress over an extended period of time. Stoneman and Crapps (1988) found satisfaction with social support to be the most powerful predictor of lowered stress and stronger perceptions of competence in caretakers of mentally retarded individuals. Dunst (1985) found social support to be correlated with fewer emotional and physical problems, healthier attitudes and perceptions toward the child, and increased interaction between the parent and child. Telleen et al. (1989) found that parent educational and support program reduced perception of child-related stresses in mothers of handicapped children.

Finally, Wallander et al. (1989) found psychosocial family support (i.e., family support, marital satisfaction, social support network) to account for significant variance in mental, physical, and social adaptation variables.

Support Effects with Young Children

Many of these studies focused specifically on young disabled children (e.g., Cutrona & Troutman, 1986; Dunst, 1985; Dunst et al.,

1986; Dunst, Trivette, & Deal, 1988; Frey, Fewell, & Vadasy, 1989). Here, the role of social support may be especially important, as stressors can be particularly potent and numerous at this time. A typical type of study was that done by Crnic, Greenberg, and Slough (1986) involving high-risk infants from one month to one year old. They found that at two different testings, social support moderated the effects of stress, as measured by a modified life events survey, and of the parent's satisfaction of her infant and the parenting role. Friedrich et al. (1985) used children as young as 3 in their analysis of social support effects on parents of mentally retarded children. They found a measure of intimate and more general sources of social support to significantly predict stress associated with parenting and family roles.

Model for Support Influence in Handicapped Families

The literature suggests a relationship between stress outcomes associated with the caretaking of disabled children, and parental perceptions of social support. Another model, in addition to the Double ABCX, is helpful in understanding how this is working. This is an ecological model (Dunst & Trivette, 1988). It views a system of inter-influencing and nested support layers, with the family and child in the center. Levels of influence proceed from more direct (e.g., family, formal kinship, informal kinship) to less direct (e.g., social organizations, human services, policy makers) and from "informal" to "formal." Within this model, social support can be expected to affect both the well-being of the parents (physical and emotional) and

parental perceptions of the child's behavior. This connection follows a hierarchical pattern. That is, support affects parental well-being; support and well-being affect family functioning; support, well-being, and family functioning affect parent-child interactions; and finally, support, well-being, family functioning, and parent-child interaction affect child behavior and development. The model has been validated with a number of studies finding the expected influences (Dunst & Trivette, 1988; Dunst et al., 1986).

Joining of Stress and Ecological Theories

This model meshes with stress theory in that each social layer may be seen as working with its own agenda of demands and coping. Thus, the stress model is within the layers of the ecological model. This view then allows for a number of hypotheses concerning the relationship between layer characteristics (e.g., demographics), social support, and stress.

Specific Variables Affecting Stress

Such hypotheses may pertain to the influence of other layer's characteristics on stress level. For example, many have found the nature of a child's disability to be a mediating factor in stress felt by the parents (parent level) (e.g., Blacher, Nihira, & Meyers, 1987; Donovan, 1988; Dunst et al., 1986; Erickson & Upshur, 1989; Frey et al., 1989; Gowen et al., 1989; Palfrey, Walker, Butler, & Singer, 1989; Stoneman & Crapps, 1988; Tavormina, Boll, Dunn, Luscomb, & Taylor, 1981). Others have not (Brotherson et al., 1988; Dunst, 1985).

Another hypothesis may look at the influence of a layers characteristics on its stress response. For example, social economic status may be a factor (Donovan, 1988; Dunst, 1985; Gowen et al., 1989; Glidden & Pursley, 1989; Nihira et al., 1983; Salisbury, 1987; Stoneman & Crapps, 1988), but it may not (Flynt & Wood, 1989). Marital status may also play a role in parental stress (Beckman, 1983; Crnic, Friedrich, & Greenberg, 1983; Gowen et al., 1989; Kirkham et al., 1986; Stoneman & Crapps, 1988).

Yet another hypothesis, and one that has already been reviewed, is the influence of social support on stress. This question, along with the others presented, converges on a main point in line with the stress and ecological models: social support, stress, and demographic characteristics are inextricably linked to one another. This is the theoretical framework for this study.

Critique of the Literature

After looking at the coping behavior of, and the effects of social support on, parents of disabled children, one must consider the reliability of the literature. Burne and Cunnigam (1985) voice a valid discontentment with stereotyping families of a handicapped child as dysfunctional and stressed. They point out that methodologically sound research in this area is lacking. Potential stress-mediating variables such as family size, age of child, type of handicap, and SES are often not taken into account; also, adequate control groups are infrequent. The authors suggest that these shortcomings "along with a narrow focus upon problems and difficulties of families tend to

contribute to the self-fulfilling nature of assumptions of homogeneity and 'pathology.'" Crnic et al. (1983) concur with Burne and Cunningham's concerns in calling for a multidimensional, systems-oriented approach to family stress investigation. Lazarus and Folkman (1984) reiterate the need for a phenomenological view of stress, negating the idea of total predictability between situations. These views suggest a need to place emphasis on parent's perspective of the handicapped child's effect on their life. Furthermore, this emphasis should look for positive and functional qualities for which to intervene (e.g., Dunst et al., 1988).

In reference to those studies reviewed within this paper, further shortcomings include small sample size, exclusive focus on the mother, the combining of different handicaps for analysis, the neglecting of demographic influences, unclear procedures and analysis, inadequate definitions of variables--very few clearly defined social support--and faulty theoretical assumptions. An example of the latter has to do with generalizing a certain stress response to many different types of families, even though basic stress theory emphasizes the unique, situational nature of stress response.

Summary

Stress among parents of handicapped children can be understood with a family stress model. This model highlights the role of: (a) social support, and (b) perceptions in response to parental demands. The effects of support--defined by perceptions--on this population is well

documented. It has been studied with various handicaps, with an emphasis on child and parental stressors, and with younger children.

This stress-support relationship fits into a larger ecological model advocated by Dunst (1985). In this model, support can be offered or received by many different social levels. The characteristics of these levels will affect the use of support, and the experiencing of stress, within each level.

A review of the literature suggests a way to view the effects and mediation of stress among parents of handicapped children. Further, it would seem beneficial to include in a study (a) an emphasis on parental perceptions, (b) applied, real-life data, (c) longitudinal data, (d) specific definitions of variables, (e) broader foci (e.g., look at demographic variables), (f) references to a specific model, (g) a large sample size, and (h) positive conceptualizations of family adaptation.

CHAPTER III

PURPOSE AND PROCEDURES

The general purpose of this study was to investigate the relationship between stress, family characteristics, and social support in families of disabled children. It was intended to be a confirmation of previous research, with an emphasis on reducing the shortcomings listed in the literature review.

Stress was defined as the amount of tension perceived by the parent as existing within the parent-child relationship. More narrowly, this was the parent's perceptions of the difficulty in caring for their handicapped child's needs, and of the difficulty in maintaining an adequate and competent parenting role. From this definition, three ways to view stress within the parent child relationship were deduced. Stress could emanate from (a) the perception of difficult child characteristics (e.g., mood, demandingness), (b) problematic parent characteristics (e.g., social isolation, sense of competence), or (c) some combination of both.

Social support was defined as aid provided by other people which was perceived by the parent as helping the family meet their needs. Sources of support included intimate (e.g., spouse, close friend) as well as less intimate (e.g., neighbor, co-worker, social worker) contacts. As discussed earlier, social support is one type of family resource, and can play a protective role in preventing a crisis, or, a helping role in enhancing coping strategies (McCubbin & Patterson, 1983a). The influence of resources on the stress process is dependent

upon the perception of those resources--thus, emphasis on the perception of social support in this study.

The association of family characteristics with perceived stress and perceived social support was also examined, as these aspects play an integral role in family definition. Indeed, in both Dunst's (1985) ecological, and McCubbin and Patterson's (1983a) Double ABCX stress model, the individuality of the family situation is emphasized. It is through the examination of family characteristics that this uniqueness is honored. These characteristics included parent and child demographics, as well as developmental indicators of the handicapped child.

There were several objectives to this study.

1. To determine if the perceived adequacy of aid provided by other people (within a social network) is a significant mediator of stress within the parent-child relationship. Aid provided by other people could be material, emotional, educational, or economic. Stress within the parent-child relationship could involve child, parent, or combined aspects.

2. To determine the degree to which certain demographic variables of the family are significant mediators of stress associated with child difficulties, parent difficulties, and a combination of the two.

3. To determine to what degree a child's level of handicap in such areas as adaptive behavior, motor movement, and cognitive functioning, is significantly associated with stress in the parent-child relationship. Stress in the parent-child relationship could be

associated with child characteristics, parent characteristics, or a combination of both.

4. To determine the degree to which certain demographic variables (e.g., socioeconomic status, age of child) significantly influence the perceived adequacy of aid provided by other people.

Hypotheses

It was hypothesized that:

1. The scores on a standardized measure of social support, as completed by the mother, will account for a significant amount of variance in the scores on a standardized measure of stress within the parent-child relationship, as completed by the mother. The standardized stress measure will yield scores relating to child difficulties, parent difficulties, and a combination of both types of difficulties. The same hypothesis holds for each score.

2. Certain demographic characteristics will account for a significant amount of variance in scores on a standardized measure of stress within the parent-child relationship, as completed by the mother. This standardized measure will yield scores relating to child difficulties, parent difficulties, and a combination of both types of difficulties. The same hypothesis holds for each score.

3. Developmental quotients representing the levels of adaptive, motor, and cognitive disabilities of the child, and obtained via a standardized instrument, will account for a significant amount of variance in scores on a standardized measure of stress within the parent-child relationship, as completed by the mother. This

standardized measure will yield scores relating to child difficulties, parent difficulties, and a combination of both types of difficulties. The same hypothesis holds for each score.

4. Certain demographic characteristics, along with developmental quotients representing the levels of adaptive, motor, and cognitive disabilities of the child, will account for a significant amount of variance in scores on a standardized measure of social support, as completed by the mother. This standardized measure will yield scores relating to child difficulties, parent difficulties, and a combination of both types of difficulties. The same hypothesis holds for each score.

Procedures

EIRI Data Set

The data for this study was obtained from a research project, coordinated by the Early Intervention Research Institute (EIRI), investigating the effects and costs of early intervention with handicapped children. The project began in 1985 under contract with the U.S. Department of Education to determine the current knowledge on early intervention. This contract called for at least 16 longitudinal studies (EIRI currently has 17 study sites) and for improved methodology over previous research.

The longitudinal investigations were initiated in the fall of 1986, after a series of feasibility studies. An experimental vs. control, or experimental vs. comparison design was used in all the studies and compared various types of intervention for young

handicapped children. An example of a design is the comparison of parent-infant educational interventions provided once per week versus three times per week. Common elements of these designs included random assignment to groups, non-biased data collection, broad measures of child and family functioning, procedures for ensuring correct implementation, technical assistance for intervention, and cost evaluation.

Collection of the Data

In each case, a pretest was administered to intervention and control groups using at least seven basic core measures; these have been followed, for each subsequent year, by a posttest consisting of the same and additional measures. These pre- and posttests were employed to measure the child's as well as the family's functioning. This study utilized five out of the basic seven measurements used in the pre-assessments--the Parenting Stress Index (Abidin, 1983), the Battelle Developmental Inventory (Newborg, Stock, Wnek, Guidubaldi, & Svinicki, 1984), the Family Support Scale (Dunst, Jenkins, & Trivette, 1984), the Family Resources Scale (Dunst & Leet, 1985), and the Family Inventory of Life Events and Changes (McCubbin & Patterson, 1983b).

The Battelle requires about two hours to administer while the other family measures take about 1½ hours, for parents reading at a fifth grade level or higher. Almost all of the parents completed the family measures at the center and without assistance. Hired diagnosticians and assessment supervisors managed the testing procedures and data collection. Parents were given money (\$10-\$35 per testing) to participate in assessments. The post-test measures

included the original seven along with "complementary measures that had been selected to yield more specific information about the particular questions under investigation at that site" (White & Mortensen, 1989, p. 27). For a listing of these complementary measures, see White and Mortensen (1989).

Sample

These 17 studies were conducted in various parts of the United States and involved diverse populations. Examples of site areas included Illinois, Arkansas, Utah, New York, Ohio, South Carolina, and Louisiana. For this study, all sites were combined and analyzed as one data set. Means and standard deviations of variables in this data set are discussed in the Results section. The average mother's age was 29.5 years, the average handicapped child's age was 27.4 months, the average number of siblings was 1.5, and the average number of people in the home was 4.5. The typical mother's educational level is 12.7 (years of schooling), her job status is unemployed or unskilled, and she is married. The typical father's educational level is 13.1, and his job status is that of a blue collar worker. The average income level of the families in this data set is \$23,273. The number of families used for the regression equations was 572. The number of families used in the correlation matrix ranged from 503 to 982, depending on the variables correlated. For a further description of individual studies within this data set, see White and Mortensen (1989).

Design

The design originally utilized four types of information from the EIRI data set. These are (a) certain demographic characteristics; (b) the motor (DQMA), cognitive (DQCA), and adaptive (DQABA) Developmental Quotient scores of the Battelle Developmental Inventory (BDI); (c) the Parenting Stress Index (PSIA); and (d) the Family Support Scale (FSSA). The Parenting Stress Index contains two subscales, representing child (PSIB) and parent (PSIC) characteristics, which were used in addition to the total.

The demographic variables included (a) marital status of the mother (MARSM); (b,c) mother's and father's job category (OCCM, OCCF); (d,e) mother's and father's level of education (EDUCM, EDUCF); (f) household income level (INC); (g) age of the handicapped child (CAPRE); (h) number of siblings in the family (SIBHC); (i) number of siblings also receiving special services (HNDSIB); (j) number of adults in the home (ADULTS); (k) number of people in the home (PEOPLE); and (l) mother's age (MOAGE). These variables and categories they fall under, via the modified Double ABCX model of stress, are shown in Table 1.

These data were used in four multiple regression analyses, all produced by an SPSSX-PC statistics package. In the first analysis, the demographic characteristics, the three BDI quotients, and the FSS score were the independent variables, while the total PSI score was the dependent variable. The second and third analyses were exactly the same except that the PSI Child and Parent subscales replaced the total PSI score as the dependent variable. In the fourth analysis, the demographic characteristics comprised the independent variables while

Table 1

Variables Used in Regression Analyses

Variable	Description
FAMILY CHARACTERISTICS	
<u>Child Functioning</u>	
DQABA	Battelle Developmental Quotient - Adaptive
DQMA	Battelle Developmental Quotient - Motor
DQCA	Battelle Developmental Quotient - Cognitive
<u>Demographics</u>	
people	Number of people in the home (adults + siblings)
adults	Number of adults in the home
sibhc	Number of siblings
hndsib	Number of sibling receiving special services
marsm	Marital status of the mother (0, 1)
occm	Occupational status of the mother
occf	Occupational status of the father
inc	Income category
capre	Child's age at pretest
educm	Educational level of mother
educf	Educational level of the father
moage	Mother's age
PERCEPTIONS OF RESOURCES	
<u>Social Support Resource</u>	
fssper	Average perceived helpfulness of support per person
fssam	Total score of Family Support Scale (FSS)
fssbm	Number of sources of support listed
<u>Specific Resources</u>	
frsa	Total score on Family Resource Scale (FRS). Subscales General Resources, Time Availability, External Support, Physical Resources
RECENT STRESSFUL EVENTS	
filea	Family Inventory of Life Events (FILE), total score

(continued)

Table 1 (continued)

Variables Used in Regression Analyses

Variable	Description
DEPENDENT VARIABLES - STRESS IN THE PARENT CHILD RELATIONSHIP	
psia	Total score of the Parenting Stress Index (PSI)
psib	Child Subscale of the PSI. Subscales = Adaptability, Acceptability, Demandingness, Mood, Distractibility, Reinforces Parent.
psic	Parent Subscale of the PSI. Subscales = Depression, Attachment, Restrictions of Role, Sense of Competence, Social Isolation, Relationship with Spouse, Parent Health

the FSS score was the dependent variable. Prior to the multiple regression analyses, a correlation matrix of the independent and dependent variables were produced and inspected for correlational relationships. Also, scatterplots of each of the independent variables with the dependent variable were produced and examined for linearity.

To test the first three hypotheses, the demographic characteristics, BDI quotients, and FSS scores were entered into three multiple regressions--one for each PSI score--to determine the amount of variance accounted for by these variables. They were entered in an unspecified order (Stepwise).

To test the fourth hypothesis, the demographic variables and BDI quotients were entered into a multiple regression equation, in an unspecified order (Stepwise), to determine the amount of variance on the FSS accounted for by these variables.

Additions to the Design

Family Resource Scale and Family Inventory
of Life Events and Changes

As analyses were conducted, several important additions to the design were implemented. One of these was the addition of two relevant variables to the PSI regressions, the Family Inventory of Life Events and Changes (FILEA), and the Family Resource Scale (FRSA). These variables were added to more fully represent the ecological context in which social support operates (Bronfenbrenner, 1979). These variables were added to the design as more knowledge about the capabilities of the EIRI data set was gathered, thus allowing for a more "true" representation of the theoretical goals of the study.

The FRS was added to introduce an alternative aspect of resources which would naturally compete with social support (FSS) as a stress mediator. This is in line with the Double ABCX (McCubbin & Patterson, 1983a) model view of resources and stress, and as this study is conceptually based on this type of model, it seems most integritous to accurately represent it. The inclusion of the FRS does not necessarily form a new objective but may be subsumed under the first objective of this study. Now, the notion of support will be expanded to represent family resources, including both a helpful social network (FSS), as well as more specific resources (FRS) (e.g., money, time) which may or may not be provided by a social network. Consistent with the first hypothesis of this study, it is expected that scores on a measure of perceived adequacy of resources (FRSA) will be significantly associated

with three types of scores (PSIA, PSIB, PSIC) on a measure of stress in the parent-child relationship.

The inclusion of the FILE, which was designed by the same authors as the Double ABCX model, was based on a similar rationale as that for the FRS inclusion. To most accurately, and in a realistic way, investigate the concept of stress proposed by the Double ABCX model, one must include the accumulation of stressors as a variable. The FILE represents this "pile up" of stressors; it is described in the data and instrumentation section of this paper. It is hypothesized that the FILE will be significantly associated with three types of scores (Parent, Child, Total) on a standardized measure of stress in the parent-child relationship (PSI).

Family Support Scale

An important aspect of this study is its focus on perceived support. Many studies, however, have viewed support in an objective fashion (e.g., number of people in one's social network). But the question arises as to how one most appropriately measures perceived social support. This question was addressed in respect to the social support measure used in this study (Family Support Scale [FSS]). More specifically, an objective was to determine which of several FSS scoring methods was the most useful in assessing perceived social support. In this study, the first type of scoring yielded a total number of sources perceived as helpful (FSSBM); the second type of scoring yielded the traditional total score of the instrument (FSSAM); finally, the third scoring method involved taking the total score of the instrument and dividing it by the total number of sources listed

(FSSPER). The last is an "average perceived helpfulness" per source and most closely represents this paper's conceptualization of perceived support. Thus, in accord with the ecological theory used by this paper, this score was expected to be more closely associated with stress than the first two FSS scores. To this author's knowledge this comparison of different FSS scoring methods has not been investigated in the literature.

It was intended that all three FSS scores would be included in the PSI regressions. Also, to investigate the differential relationships of these FSS scores with demographic variables, three FSS regressions, instead of one, were completed (hypothesis 4). This increased the total number of regression analyses to six instead of four.

Data and Instrumentation

Parenting Stress Index

The Parental Stress Index (PSI) is a self-report measure used to assess the "relative magnitude of stress in the parent-child system" (Loyd & Abidin, 1985). It contains 101 statements concerning caretaking difficulties and parental self-perceptions to which the parent rates the level of agreement (1-5). Three areas are scored from these statements: (a) total stress score, (b) stress from child characteristics, and (c) stress from parent characteristics (Total, Child Domain, Parent Domain). Furthermore, within each of the child and parent domains are subscales. Those under Child include adaptability, acceptability, demandingness, mood, distractibility or hyperactivity, and reinforces parent. Those under Parent include,

depression, attachment, restrictions of role, sense of competence, social isolation, relationship with spouse, and parent health. Although, either parent may complete the PSI and be scored on these areas, the mother usually does so. This is because she is "typically the keystone of the family system and is most knowledgeable about and most reflective of the pressures and stresses present in the entire parent-child system" (Loyd & Abidin, 1985). Need for intervention may be suggested by raw scores lower than 175 or higher than 245.

The reliability of the PSI has been confirmed by a number of studies. One study (Loyd & Abidin, 1985) found reliability among 534 parents of normal and behavioral problemmed children to range from .62 to .70 for subscales in the Child Domain and from .55 to .80 for subscales in the Parent Domain. Reliability for the Child Domain was .89 while reliability for the Parent Domain was .93. Total score reliability was .95.

Loyd and Abidin (1985) note studies which have evidenced high test-retest reliabilities (e.g., Abidin, 1983; Hamilton, 1980; Zakreski, 1983), and review one in particular (Burke, 1978) which achieved Spearman rank order coefficients of .817 and .706 for the Child and Parent domains, respectively.

Factor analysis has confirmed the distinctiveness of the Child and Parent domains and of their respective subscales, with 58% of measurement variance accounted for by the two factors.

Construct validity has been supported by a number of studies. An example comes from Noh, Dumas, Wolf, and Fisman (1989) who found the

PSI to discriminate between families with normal, autistic, mentally retarded, and conduct disorder children.

Family Support Scale

The Family Support Scale (FSS) is "an 18 item self-report measure designed to assess the degree to which different sources of support have been helpful to families rearing young children" (Dunst et al., 1984). After rating the 18 sources from 0 (not at all helpful) to 4 (extremely helpful), scores are added to obtain a "helpfulness index." Also used as a measure of support is the total number of sources available to the family.

Dunst et al. (1984) investigated the reliability and validity of the FSS with 139 parents of preschool handicapped, mentally retarded, and developmentally at-risk children. Their results showed an alpha reliability of .77, a split half of .75 and a test-retest (one month) of .91. A long term test-retest (avg. = 18 months) resulted in .47. Construct validity was evidenced in the emergence of six orthogonal factors which accounted for 62% percent of the total variance in the measurement. The factors are: informal kinship, social organizations, formal kinship, nuclear family, specialized professional services, and generic professional services. All items loaded highly on the these different factors, thus adding to content validity. Criterion validity was tested using a multiple regression with FSS and some demographics as the independent variables, and with personal and family well being, number of parent-child interactions, and child progress as the dependent variables. Findings showed the FSS to account for a significant amount of variance in emotional and physical health of the

family, as well as number of parent-child interactions and child progress. The authors conclude the FSS to be a "sensitive instrument for discriminating between individuals who manifest differing levels of stress and coping." This conclusion is confirmed by a number of studies investigating parental stress and coping in families with a handicapped child (e.g. Frey, Fewell, & Vadasy, 1989; Erickson & Upshur, 1989; Frey, Greenberg & Fewell, 1989). The FSS was locally normed on 854 parents of handicapped children.

Family Resource Scale

The Family Resource Scale (Dunst & Leet, 1985) is a self-report, 30-item questionnaire designed to assess a family's ability to meet their current needs. Parents are asked to rate the perceived level of adequacy of specific resources on a scale ranging from 1 (not at all adequate) to 5 (almost always adequate); "not applicable" may also be checked. The types of resources represented by the items are based on a needs hierarchy and are ordered from most basic (food for two meals a day) to least basic (vacation/travel). A total score, as well as four subscales are obtained from the instrument. The four subscales are General Resources, Time Availability, Physical Resources, and External Support. Research suggests that Time Availability and General Resources are the primary subscales. The FRS was locally normed on 861 parents of handicapped children.

Reliability and validity characteristics of the FRS are good. Test-retest reliability (2 months) is .70. Coefficient alpha has been reported as .94, suggesting the measurement of a homogeneous construct. Content validity was demonstrated by an expert rank ordering of the

scale items; a correlation between this ranking and the actual order of the scale items was .81 (Dunst & Leet, 1985). Construct validity was demonstrated through factor analysis, which revealed four factors representing the current four subscales; 64% of the variance was accounted for. Finally, criterion validity was demonstrated by significant correlations of the FRS with a variety of rating scales for personal well-being and availability of time and energy (Dunst & Leet, 1987).

Battelle Developmental Inventory

The Battelle Developmental Inventory (BDI) (Newborg et al., 1984) is a standardized assessment used in evaluating the developmental abilities of children age birth to eight years. It is norm referenced and allows for a standard score, T-score, or age equivalent comparisons. A total score is obtained, as well as five domain scores tapping motor, adaptive, communicative, cognitive, and personal/social skills.

The BDI manual reports high test-retest (4 weeks) reliabilities for age ranges similar to those of children in this study. The Total score reliability is .99 and domain score reliabilities range from .94 to .99. Interrater reliability is also high, with correlations ranging from .93 to .99 for both the Total and domain scores.

Content validity has been established by a "lengthy test development process" (p. 60) involving the identification of general skills areas, the selection and development of items, and the verification of results by content experts.

Construct validity is suggested high and positive intercorrelations among BDI subdomains, pointing to a "common rate of development" prediction (p. 60). Factor analyses supports the existence of subdomains. Finally, in a comparison of 160 variously handicapped children with nonhandicapped children, all but 10 BDI subscores significantly discriminated between the two groups.

Concurrent validity is evidenced by moderate to high correlations with similar, valid assessments. Total and domain score correlations with the Vineland Social Maturity Scale (Doll, 1965) range from .82 to .94. Correlations range from .78 to .92 with the Developmental Activities Screening Inventory (DASI) (Dubose & Langley, 1977). Correlations range from .42 to .75 with the Weschler Intelligence Scale for Children--Revised (Weschler, 1974). Finally, Total and domain score correlations with the Peabody Picture Vocabulary Test (PPVT) (Dunn & Dunn, 1981) range from .36 to .83.

Family Inventory of Life Events and Changes

The Family Inventory of Life Events (McCubbin, Patterson, & Wilson, 1983) is a self-report, 71-item questionnaire in which a respondent indicates whether he or she has experienced certain stressful events within the last 12 months. These events fall into nine categories which include intra-family strains, marital strains, pregnancy and childbearing strains, finance and business strains, work-family transitions and strains, illness and family "care" strains, losses, transitions "in and out," and family legal violations. The FILE is based on a model of stress which views the "pile up" of stressors as a primary cause of stress and of physical and mental

maladjustment. The FILE was nationally normed on 980 couples (1,960 individuals) across the life cycle. Cronbach's alpha reliability for the FILE is .81.

Reliability and validity characteristics of the FILE are good. Test-retest reliability (4 weeks) is .80. Cronbach's alpha is .81, suggesting the measurement of a homogeneous construct. Concurrent validity was demonstrated by significant correlations with ratings on a family functioning scale, the Family Environment Scale (FES) (Moos, 1974). Construct validity was evidenced by a factor analysis which revealed factors closely approximating the current subscales. The FILE has also significantly discriminated between high and low conflict families. Finally, predictive validity was demonstrated by the following of 100 families of children with cystic fibrosis. Those children whose condition deteriorated the most over time were in families whose total FILE scores also increased the most over time (McCubbin & Patterson, 1983b).

CHAPTER IV

RESULTS

Correlational Results

The correlational matrix of the variables in question is presented in Table 2. Inspection of this matrix and of the scatterplots among the same variables revealed no major difficulties with colinearity or curvilinear relationships.

Education, Income, and Number
of People in the Home

Out of 253 possible correlations among the variables, 111 were significant at the .001 level. Of special interest were certain economic indicators. For example, income was more highly correlated with the occupation of the father ($r = .58, p < .001$) and the education of the father ($r = .56, p < .001$) than either the occupation of the mother ($r = .32, p < .001$) or education of the mother (.51). Also, the correlation between the father's educational level and occupational level was much higher ($r = .62, p < .001$) than the same correlation for the mother ($r = .36, p < .001$). There was a high correlation between the education of the mother and the education of the father ($r = .63, p < .001$). There was a negative correlation between mother's occupational level and people in the home ($r = -.10, p < .01$), and mother's occupational level and number of siblings ($r = -.10, p < .01$), in contrast to the positive correlations for the father on the same relationships ($r = .09, p < .01$); $r = .08, p < .05$).

Table 2

Correlation Matrix of Variables Used in Regression Equations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1 people																								
2 adults	.48																							
3 sibhc	.91	.08																						
4 hndsib	.30	-.03	.34																					
5 marsm	.21	.16	.15	.08																				
6 dqaba	.01	-.01	.01	.03	-.03																			
7 dqma	.02	-.00	.03	.05	.02	.57																		
8 dqca	.01	-.03	.02	.03	.09	.48	.63																	
9 occm	-.10	-.02	-.10	-.12	.11	-.01	.00	.05																
10 occf	.09	.06	.08	-.11	.23	-.01	*-.06	.03	.22															
11 inc	.10	.09	.07	-.07	.44	-.06	*-.07	.01	.32	.58														
12 capre	.17	-.03	.20	.15	.03	-.03	-.15	-.04	-.03	.15	.07													
13 educm	-.01	-.01	-.01	-.07	.25	-.01	-.04	.04	.36	.53	.51	.00												
14 educf	.07	.01	.07	-.06	.30	.01	-.05	.01	.22	.62	.56	.06	.63											
15 frsa	-.13	.03	-.16	-.11	.23	.09	.03	.06	.05	.30	.39	.01	.27	.32										
16 moage	.30	-.04	.33	.13	.22	-.02	-.13	-.01	.15	.39	.42	.27	.37	.35	.10									
17 psia	.00	-.08	.04	.07	-.15	-.15	-.08	-.13	-.09	-.19	-.20	.05	-.19	-.20	-.42	-.06								
18 psib	.02	-.06	.01	.05	-.16	-.23	-.15	-.21	*-.07	-.17	-.16	.09	-.18	-.17	-.28	-.06	.86							
19 psic	.03	-.09	.08	.07	-.12	-.03	.02	-.02	-.10	-.17	-.20	.00	-.17	-.20	-.45	-.05	.89	.57						
20 fssper	-.09	-.01	-.10	-.13	.21	.02	-.02	.05	*.07	.17	.24	.01	.23	.28	.38	.09	-.33	-.25	-.33					
21 fssam	-.10	-.03	-.11	-.11	.16	.02	-.06	.00	.09	.08	.20	-.03	.19	.20	.33	.00	-.29	-.21	-.30	.81				
22 fssbm	-.03	-.03	-.01	.04	-.09	-.03	-.05	-.09	-.02	-.16	-.09	*-.06	-.13	-.18	-.10	-.17	.08	.08	.06	-.38	.19			
23 filea	.06	.01	.07	.08	-.05	-.03	.02	.02	.13	-.04	-.07	-.07	.04	-.02	-.35	-.06	.34	.22	.37	-.11	-.06	.07		
MEAN	4.5	2.0	1.5	.2	.8	67.5	67.7	63.9	.8	2.0	23272	27.4	12.7	13.1	117.6	29.5	242.0	114.0	128.0	1.9	29.0	15.0	10.6	
STD	1.6	.7	1.4	.5	.4	30.5	27.5	28.4	1.2	1.2	19571	19.8	2.2	2.4	19.6	6.7	42.9	22.1	26.2	.8	11.5	3.3	6.9	

^a The n's for correlated variables range from 503 for OCCF with FSSPER to 982 for SIBHC with HNDSIB.

^b Correlations less than + or - .06 or which have an "*" to the left of them are insignificant at the p = .05 level.

Family Support Scale and Family Resource Scale

Another set of correlations worthy of note were those involving the FSS scores. The FSSBM correlated moderately negatively ($r = -.38$, $p < .001$) with the FSSAM and mildly positively ($r = .19$, $p < .001$) with the FSSPER. Also, as seen by a high FSSPER-FSSAM correlation ($p = .81$), as the total perceived helpfulness score increases, the average perceived helpfulness per person also tends to increase. The three FSS scores were also correlated with the FRS. This resulted in correlations of .38, .33, and .10 for FSSPER, FSSAM and FSSBM, respectively.

Battelle Developmental Inventory and Parenting Stress Index

Two other important sets of correlations are the intercorrelations among the three BDI scores and among the three PSI scores. Among the three BDI scores, the cognitive and motor subscale correlated most highly ($r = .63$, $p < .001$), the motor and adaptive subscales second most highly ($r = .57$, $p < .001$), and the cognitive and adaptive subscales the least highly ($r = .48$, $p < .001$). In regards to the PSI, the parent and child subscales shared a correlation of .57 ($p < .001$). Both subscales correlated highly with the total PSI score-- $r = .86$ for Child ($p < .001$), and $r = .89$ ($p < .001$) for Parent.

Regression Results

The first hypothesis of this study was that scores on a standardized measure of social support (FSS) would be a significant predictor of the scores on a standardized measure of stress within the parent-child relationship (PSI). Three types of FSS scores were used:

(a) the FSSAM, (b) the FSSBM, and (c) the FSSPER. In this analysis, it was the alternatively scored FSS (FSSPER), and not the traditionally scored FSS (FSSAM), or the number of sources (FSSBM), which accounted for significant variance in the total PSI score (PSIA), the Child subscale (PSIB), and the Parent subscale (PSIC). In the primary analyses, all three scored FSS's were entered into the equation, but when the superiority of the FSSPER as a predictor variable became evident, the FSSAM and FSSBM were dropped from the equation. Specifically, neither the FSSAM nor FSSBM scores emerged as predictors in any of the PSI regressions. This supports the earlier conjecture that the FSSPER would be more closely associated with stress than either the FSSAM or FSSBM. The deletions of the FSSAM and FSSBM were also done for colinearity reasons--the FSSPER and FSSAM correlated at $r = .81$. In the final analyses, and as seen by Table 3, the FSSPER accounted for 2.4% of the variance in the total PSI score ($p < .05$, $df = 569$), 1.6% of total variance in the Child subscale ($p < .05$, $df = 568$), and 2.9% of the total variance in the Parent subscale ($p < .05$, $df = 568$) This hypothesis was statistically confirmed.

The second hypothesis of this study was that certain demographic characteristics would be significant predictors of scores on a standardized measure of stress within the parent-child relationship (PSI) (see Table 4). This hypothesis was statistically confirmed. The number of adults in the home and the occupation of the mother were both significant predictors ($p < .05$) of the Total PSI score. However, together they accounted for less than 2% of the total variance.

Table 3

Stepwise Regressions on PSIA, PSIB, and PSIC

PSIA Step Number	Variable	Standard Beta in Final Equation	Adjusted R ²	Added R ²
1	FRSA	-.2554	.190	
2	FILEA	.2603	.238	.048
3	FSSPER	-.1874	.262	.024
4	DQABA	-.1438	.282	.020
5	ADULTS	-.1168	.294	.012
6	OCCM	-.0902	.300	.006
.....				
PSIB Step Number	Variable	Standard Beta in Final Equation	Adjusted R ²	Added R ²
1	FRSA	-.1049	.080	
2	DQABA	-.2486	.132	.052
3	FILEA	.2013	.159	.027
4	FSSPER	-.1550	.175	.016
5	EDUCF	-.1262	.187	.012
6	ADAPT	.0939	.192	.005
7	CAPRE	.0948	.197	.005
8	PEOPLE	-.0962	.204	.007
.....				
PSIC Step Number	Variable	Standard Beta in Final Equation	Adjusted R ²	Added R ²
1	FRSA	-.2872	.206	
2	FILEA	.2574	.255	.049
3	FSSPER	-.1894	.284	.029
4	ADULTS	-.1160	.296	.012
5	OCCM	-.0858	.301	.005

Table 4

Stepwise Regressions on Average Perceived Social Support (FSSPER), Total Score of Perceived Support (FSSAM), and Total Number of Sources Acknowledged (FSSBM)

FSSPER Step Number	Variable	Standard Beta in Final Equation	Adjusted R ²	Added R ²
1	EDUCF	.1327	.050	
2	PEOPLE	-.1501	.069	.019
3	MARSM	.1312	.084	.015
4	EDUCM	.1094	.089	.005
.....				
FSSAM Step Number	Variable	Standard Beta in Final Equation	Adjusted R ²	Added R ²
1	EDUCM	.1256	.036	
2	PEOPLE	-.1463	.053	.017
3	INC	.1187	.062	.009
.....				
FSSBM Step Number	Variable	Standard Beta in Final Equation	Adjusted R ²	Added R ²
1	EDUCF	-.1178	.023	
2	CAPRE	-.0963	.034	.011
3	DQCA	-.0999	.044	.010
4	MARSM	-.0959	.051	.007

Regarding the Child subscale of PSI, the education of the father, age of the target child, and number of people in the home were significant predictors ($p < .05$). Together, they accounted for around 2% of the total variance. Finally, with the PSI Parent subscale, the number of adults in the home and the occupation of the mother were significant

predictors ($p < .05$). However, they accounted for less than 1.8% of the total variance.

The third hypothesis of this study was that developmental quotients representing adaptive (DQABA), motor (DQMA), and cognitive difficulties (DQCA), would account for a significant amount of variance in scores on a standardized measure of stress within the parent-child relationship (PSI). This hypothesis was partially confirmed. The DQABA contributed the fourth highest amount of added variance (2.6%) in the Total PSI regression ($p < .05$, $df = 568$). It contributed the second highest amount of unique variance (5.2%) in the Child PSI regression ($p < .05$, $df = 570$). It was not a significant predictor in the Parent PSI regression. The DQMA and DQCA were not significant predictors of the Total PSI scores, the Child PSI subscores, or the Parent PSI subscores.

The fourth hypothesis of this study was that certain demographic characteristics and developmental difficulties of the child (DQABA, DQMA, DQCA) would account for a significant amount of variance in scores on a standardized measure of social support (FSS). Though this hypothesis was statistically confirmed, the results are, in a practical sense, negligible (see Table 3). All three types of scores for the FSS (FSSPER, FSSAM, FSSBM) were analyzed. Education of the father was the most significant predictor of FSSPER, accounting for 5% of the total variance ($p < .05$). This was followed by the number of people in the home (1.9%), marital status of the mother (1.5%), and education of the mother (.5%) ($p < .05$). The total percent of variance accounted for amounted to only 8.9%. In the FSSAM regression, the most significant

predictor was education of the mother, accounting for 3.6% of the total variance ($p < .05$). This was followed by the number of people in the home (1.7%) and the family income (.9%) ($p < .05$). The total percent of variance accounted for was 6.2%. Finally, in the FSSBM regression, education of the father was the most significant predictor (2.3%) ($p < .05$). This was followed by the age of the target child (1.1%), and the marital status of the mother (.7%) ($p < .05$). Total percent of variance accounted for was again small, at only 4.1%. It should be noted that the highest amount of accounted for variance is found with the "average perceived" scoring of the FSSPER.

Additional Results

The contribution of variables later added to the design (the FILE and FRSA) was substantial. In all three PSI regressions, the FRSA emerged as the primary significant predictor. It accounted for 19.5% ($p < .05$, $df = 571$) of the total variance in the Total PSI regression, 8.3% ($p < .05$, $df = 571$) of the variance in the Child PSI regression, and 21.1% ($p < .05$, $df = 570$) of the variance in the Parent PSI regression. The amount of variance accounted for in the Total and Parent regressions is not only statistically significant, it is pragmatically significant, and suggests that around one fifth of the variance in these stress scores may be predicted by the FRS.

The FILE was entered on the second step of the Total and Child subscale PSI regressions and on the third step of the Child subscale regression. The FILE accounted for 4.9% ($p < .05$, $df = 570$) of the total variance in the Total PSI regression, 2.7% ($p < .05$, $df = 569$)

of the total variance in the Child PSI subscale, and 5% ($p < .05$, $df = 569$) of the total variance in the Parent PSI subscale.

The contribution to variance accounted for by the FILE is mildly greater than that of the FSSPER, around 2%, in all three equations. It is mildly greater than the most predictive demographic characteristic in the Total and Parent PSI regressions--around 4%; and it is mildly less than the DQABA in the Child PSI regression--2.5%. The differences among other predictor variables in contributing to total variance accounted for is equally mild. The difference between the FRS and the next best predictor in all three regressions, however, in terms of percentage of variance claimed, is 14.2%, 3%, and 15.7% for the Total, Child, and Parent PSI regressions, respectively. Though the Child PSI regression is not impressive, the Total and Parent are, and point to the integral function of this variable in obtaining 30.6%, 19.7%, and 31% of the total claimed variance in the Total, Child, and Parent PSI regressions, respectively.

An important aspect of this study is the characterization of the sample. Descriptive results, as seen in Table 1, show the average FSS (FSSAM, traditional score) to be 29; this is at the 55th percentile within a norming group of similar families. The average FSSPER and FSSBM scores are 2.0 and 15.0, respectively--norms were not available on these scores. The average Total, Child and Parent scores of the PSI were 242, 114, and 128, respectively. These were at the 73rd, 80th, and 63rd percentiles, respectively. The average FILEA score was 10.6--this was at the 29th percentile. This means that families in this sample typically reported a lower or an equal amount of stressful

events than 29% of the norming sample. The average FRSA score was 117.6, which was at the 48th percentile. Taken together, these statistics suggested that the study families typically displayed an average level of perceived social support and perceived general support in relation to their reference group. Contrastingly, they displayed an above average incidence of life stressors and an above average level of perceived stress in relation to parents of nonhandicapped children. These results were expected and are consonant with previous research (e.g., Gayton et al., 1977; Kazak & Marvin, 1984; Wolf et al., 1989).

CHAPTER VI

DISCUSSION

This study examined the relationship between family resources, family characteristics, life events, and stress, in families of children with developmental disabilities. It was found that all of these variables had some association to stress, in particular family resources dealing with specific needs.

Family Resources

The FSS, measuring perceived social support, and the FRS, measuring the perceived adequacy of resources, were used to represent family resources in this study (see p. 32). As discussed earlier, while the FSS measures the social network providing more specific resources, the FRS focuses directly on the specific resources. In any case, the findings suggest that both perceived social support and perceived adequacy of resources are significantly associated with perceived parental stress. These notions are in accord with previous research (Cole & Meyer, 1989; Dunst et al., 1986; Frey, Fewell, & Vadasy, 1989; Frey, Greenberg & Fewell, 1989; Friedrich et al., 1985; Jennings, 1990; Minnes, 1988; Petersen, 1984; Schilling et al., 1984; Telleen et al., 1989). In addition, the findings indicate an unequal weighting of the two types of resources. Need hierarchy theory is helpful in understanding this outcome.

As discussed by Dunst et al. (1988), the idea of a need hierarchy suggests that an individual's thoughts and behaviors are decided by specific patterns of met and unmet needs. Furthermore, certain needs

are deemed more basic than others and must be satisfied before others can be addressed. Though some researchers (e.g., Maslow, 1954) present this prioritizing as being similar across persons, Dunst et al. emphasize the "highly personalized and unique" (p. 17) nature of family need hierarchies. The FRS and FSS are applicable to these ideas in that they both tap resources used in meeting needs. In this way, they both indirectly represent a family's perceived needs hierarchy. The difference between the two measures, however, lies in the comprehensiveness with which they represent this hierarchy. For example, the FRS relates to a variety of perceived needs, ranging from the basic (e.g., food, shelter) to the luxurial (vacation, socializing time). In contrast, the FSS looks at one broad type of need, social support, and does not address the adequacy of more narrow and specific needs. Thus, the FRS presents a more thorough representation of a family's perceived pattern of needs. Consequently, family stress, itself dependent upon the reduction of coping needs, via resources, (McCubbin & Patterson, 1983a) is likely to be more thoroughly represented by the FRS than the FSS.

Family Characteristics

In regard to family characteristics, the findings suggest that these variables have some influence on parental stress. This corroborates previous research finding various family aspects, such as the number of people in the home, social economic status, degree of impairment, marital status, and child's age, to be significantly associated with stress (Beckman, 1983; Bendell, Stone, Field, &

Golstein, 1989; Blacher et al., 1987; Donovan, 1988; Ericksen & Upshur, 1989; Stoneman & Crapps, 1988). It is in disalignment, however, with similar research showing many of these characteristics to not be significantly associated with stress (e.g., Flynt & Wood, 1989; Friedrich et al., 1985; McCubbin, 1988; Wolf et al., 1989).

Particularly interesting was the finding of a stronger association between family characteristics and child-related stress (PSIB), than between other aspects of stress--total (PSIA) or parent related (PSIC).

The child's degree of handicap appeared to be major contributor to this outcome, accounting for 5% of the variance in the regression equation. This supports past research presenting the degree of child's disability as a significant influence on stress (Bristol, 1987; Dunst, Leet & Trivette, 1988; Holroyd & Guthrie, 1986; Minnes, 1988). The emergence of adaptive ability (DQABA), over motor (DQMA), or cognitive (DQCA) ability, as a stress associate, is less clearly aligned with previous research. First, several researchers comparing child competencies have found communication skill to be most predictive (Frey, Fewell, & Vadasy, 1989; Frey, Greenberg & Fewell, 1989). Second, comparisons to past research are a priori difficult, since few reviewed studies employed the BDI or utilized a domain distinctly representing "adaptive" abilities.

Family characteristics were also investigated for their association with perceived social support. Findings suggest that family variables do indeed predict perceived social support, but only to a small degree. Specifically, no more than 8% of the variance in social support was accounted for in any equation in this study. One

indirect interpretation of this finding has been before in the literature. It pertains to the idea that much should be considered, besides family characteristics, before making assumptions about, and intervening in, a family's social organization (Bailey & Simeonsson, 1988; Roberts & Magrab, 1991). That is, objective family characteristics are not sufficient. Other variables such as family dynamics, perceptions of social support, and so forth, need to be taken into account to best understand the family's condition.

Life Events and the Double ABCX Model

The accumulation of stressful life events has been proposed as an important factor in the stress response of families (Austin, 1990; McCubbin, 1988; McCubbin et al., 1980; McCubbin & Patterson, 1983b). The present study supports this proposition, with stressor pile-up (FILE) consistently being the second or third strongest predictor in the analyses.

This finding, as well as the findings concerning family resources and family characteristics, can be understood in light of a Double ABCX type model of stress. This model posits that the amount of stress and disruption which may develop within a family system can depend on several factors. These include the "pile-up" of stresses and strains, adaptive resources available to deal with stressors, and family perceptions of stressors and resources. The variables used in this study represented these factors, and furthermore appear to interact in a way expected by the Double ABCX model; specifically, they all influence the perception of stress to some degree. In addition, they exert this influence in unequal ways. For example, perceptions of

resources (i.e., FSS, FRS) appear to be much more closely associated with perceptions of stress than the objective existence of resources (e.g., income, marital status). This is in line with Double ABCX, and other, research noting the paramount importance of psychological, versus objective, qualities of family members in understanding stress (Austin, 1990; Barrera, 1981; Cole & Meyer, 1989; Dunst, 1985; Dunst et al., 1988; Schilling & Schinke, 1984; Stoneman & Crapps, 1988; Vadasy et al., 1985).

To gain additional perspective on the results of this study, one must consider the weaknesses of Double ABCX type model employed within it. For example, the model's emphasis on systems stress can be confusing. Specifically, though the Double ABCX model is based on the family stress response, investigations confirming the model primarily look as individual stress responses. The implication is that, though one may wish to view the family as a unit, one must not forget the members which make up the unit. Does a family think, or does an individual? In addition is the issue of ambiguity in deciding what is a resource and what is a stressor. Flynt and Wood's (1989) study is applicable to this question. In their paper, they did not clarify which family characteristics were resources and which were stressor characteristics. This leads to an important aspect of the Double ABCX model--what is stressor and what is resource depends upon family perceptions. Could not a child's age be perceived as a resource if s/he was more independent than before, and yet as a stressor if s/he was still quite dependent and fragile?

Major Implications

The results of this study can be evaluated on three levels: (a) statistical, (b) practical, and (c) clinical. In regard to the statistical area, many of the findings of this study are significant, and, thus, appear to confirm previous research. A caution must be used, however, in regard to the role of a large sample size in these results. As a large sample size can enhance the likelihood of obtaining statistical significance, the reaching of statistical significance in these analyses should be viewed carefully. This issue is addressed later in the weaknesses section.

On the practical level, many of the findings are not significant, and bring into question the feasible utilization of the results. For example, the FRS contributed around 20% of total stress variance in two regression equations, both a statistically and practically significant amount. However, no other independent variable contributed over 5% total variance in any of the equations, a statistically, but not practically, significant amount.

In the same vein, the total amount of variance accounted for in any PSI regression equation was 31%. Although this is statistically significant and may be considered practically significant, 69% of the variance is still unaccounted for. This represents a large amount of uncertainty in determining parental stress. Though this incertitude is smaller in studies obtaining R^2 's as high as .51 (Frey, Greenberg & Fewell, 1989), .72 (Dunst et al., 1988), .54 (Bendell et al., 1989), and .49 (Frey, Fewell, & Vadasy, 1989), the point is the same. See Tables 5 and 6 for a compendium of comparable studies on this topic.

Table 5

Correlational Studies

Author	Dependent	Predictor Variables	R ²	TR ²	Type of Measurement
Bendell, Stone, Field, & Goldstein (1989) [66, black urban, low SES, at risk, 5-8 yrs.]	PSI-Parent (stepwise)	Child behavior problems	.28	.44	Eyberg Child Behavior Inventory (36-item) Self-drawing Rosenburg Self-Esteem Inventory (10-item) Demographic Questionnaire
		Child's stress/depression	.06		
		Maternal self-esteem	.06		
		# people in home	.04		
	PSI-Child	Child behavior problems	.40	.54	Eyberg Child Behavior Inventory Wide Range Achievement Test--Revised Rosenburg Self-Esteem Inventory
		WRAT-R spelling skills	.08		
		Maternal self-esteem	.06		
	PSI-Total	Child behavior problems	.41	.54	Eyberg Child Behavior Inventory Rosenburg Self-Esteem Inventory Wide Range Achievement Test--Revised
		maternal self-esteem	.08		
WRAT-R spelling skills		.05			
Frey, Fewell, Vadasy (1986) [48, handicapped, mean = 59 months]	Father Daily Parenting Hassles QRS-F (stepwise)	Child's communication		.43	Vineland Adaptive Behavior Scale - Communication Interview parent Problem Solving Assessment Task
		child's sex father's problem solving			
	Mother Daily Parenting Hassles QRS-F	child's communication		.49	Vineland Adaptive Behavior Scale - Communication Interview
		child's sex			
Frey, Greenberg, Fewell (1989) [48, handicapped, mean = 83 months]	QRS-F Daily Parenting Hassles (forced)	Communication skill	.21	.51	Vineland Adaptive Behavior Scale - Communication Demographic questionnaire Family Support Scale Interview Comparative Appraisals Scale/Self-rating of self-efficacy Rating of spouse coping efficacy, Belief in Personal Control Scale Ways of Coping Checklist
		child sex	.10		
		social support	.00		
		network criticism	.00		
		beliefs	.27		
		ways of coping	.00		
		Brief Symptom Checklist	communication skill		
	child sex	.03			
	social support	.02			
	network criticism	.00			
	beliefs	.10			
	ways of coping	.23			

(continued)

Table 5 (continued)

Correlational Studies

Author	Dependent	Predictor Variables	R ²	TR ²	Type of Measurement
Friedrich, Wilturner, & Cohen (1985) [140, mentally retarded, mean = 10.5 yrs.]	QRS-F Factor 1 (forced)	social desirability	.00	.64	Marlowe Crowne Interview 53-item problem checklist Demographic Questionnaire Locke-Wallace Marital Adjustment Inventory (9-item) Family Relations Index (from Family Environment Scale) 29-item Internal-External Locus of Control Scale Beck Depression Inventory
		medical involvement	.17		
		child behavior problems	.27		
		maternal education	.00		
		social support	.08		
		social support 2	.05		
		beliefs	.02		
		health/energy/morale	.05		
Gowen, Johnson-Martin, Goldman, & Appelbaum (1989) [21 handicapped, 27 months]	CESDS (depression) (stepwise)	level of functioning*		.53	Stanford-Binet Parenting Questionnaire/Carolina Record of Individual Behavior Caregiving Questionnaire Parenting Questionnaire/Carolina Record of Individual Behavior Carolina Social Support Scale (20 items) Parenting Questionnaire
		irritability			
		caregiving difficulty**			
	Parenting Questionnaire (competence)	level of functioning		.39	Stanford-Binet Parenting Questionnaire/Carolina Record of Individual Behavior Caregiving Questionnaire Parenting Questionnaire/Carolina Record of Individual Behavior Carolina Social Support Scale/Parenting Questionnaire
		irritability			
		caregiving difficulty			
Stoneman & Crapps (1988) [104 care providers, 57% 18- 45 yrs., mentally retarded]	QRS-F Factor 1 (forced)	provider's age	.04	.53	Demographic Questionnaire Demographic Questionnaire Demographic Questionnaire 5 item questionnaire 11 item questionnaire (taken from Adaptive Behavior Scale) 2 item, 4 point rating 1 item Roberts and Feetham measurement
		provider's income	.03		
		provider's marital status	.04		
		adaptive abilities	.04		
		behavior problems	.07		
		neighbor's attitudes	.08		
		provider's training	.06		
	social support	.17			
	PSI Sense of Competence Subscale	provider's age	.00	.43	Demographic Questionnaire Demographic Questionnaire Demographic Questionnaire 5 item questionnaire 11 item questionnaire (taken from Adaptive Behavior Scale) 2 item, 4 point rating 1 item Roberts and Feetham measurement
		provider's marital status	.02		
		handicapped family member	.11		
		adaptive abilities	.01		
		behavior problems	.01		
		neighbor's attitudes	.09		
provider's training		.01			
social support	.18				

** most significant predictor
* next significant predictor

(continued)

Table 5 (continued)

Correlational Studies

Author	Dependent	Predictor Variables	R ²	TR ²	Type of Measurement
Wallander, Varni, et al. (1989) [50, 6-11 yrs., physical handicap]	Maternal adaptation Malaise Inventory (12 mental health items) (forced)	utilitarian resources	.16	.57	Demographic checklist Child Behavior Checklist Family Environment Scale (27-item)/Dyadic Adjust. Scale (32-item) Social Support Questionnaire Checklist of 20 services
		child adjustment	.03		
		psychosocial resources	.34		
	(12 physical health items)	service utilization	.04	.38	
		utilitarian resources	.03		
		child adjustment	.03		
		psychosocial resources	.26		
	Social and Activities questionnaire	service utilization	.02	.68	
		utilitarian resources	.32		
		child adjustment	.03		
psychosocial resources		.22			
		service utilization	.11		

Table 6

Studies with Dependent Variables and Added Variance

Author							
Dunst, Trivette, & Cross (1986) (forced)	<u>QRS Personal Well-Being Emotional and Physical Health</u>	Time Demands	<u>Attitudes Toward Child Negative Attitudes</u>	Overcommitment	Overprotection	Pessimism	<u>Family Integrity Family Opportunities</u>
Family Characteristics	.034	.058	.008	.017	.014	.021	.071
Child Characteristics	.026	.014	.032	.039	.023	.065	.005
Diagnosis of Child	.042	.040	.145	.102	.063	.09	.031
Satisfaction with Support	.035	.035	.000	.003	.029	.003	.015
# of Sources of Support	.005	.015	.019	.032	.019	.001	.012
Total R-squared	.337	.32	.359	.329	.448	.387	.352
[137, at risk, handicapped, retarded, mean = 38 months]	<u>QRS Child Functioning Physical Limitations</u>	In-home Engagement	Social Acceptance	Behavior Difficulty			
Family Characteristics	.005	.085	.004	.027			
Child Characteristics	.020	.051	.007	.007			
Diagnosis of Child	.332	.021	.096	.210			
Satisfaction with Support	.011	.016	.024	.018			
# Sources of Support	.047	.007	.050	.038			
Total R-Squared	.530	.326	.369	.447			

This issue of practical significance plays an important role in the designing of clinical interventions. If certain aspects of a model (e.g., ecological, Double ABCX) have been both statistically and practically confirmed, these aspects should receive emphasis within intervention programs. Case in point, the perceived inadequacy of resources emerged as a paramount predictor of perceived parental stress within this study. This finding suggests that the prioritizing of perceived needs within family interventions may be highly beneficial to the efficient running of those programs. Dunst et al. (1988) expressed this in stating that,

Before parents are asked to carry out professionally prescribed, child-level interventions, efforts to meet other family-identified needs must be made for parents to have the time and energy to work with their children in an educational or therapeutic capacity. (p. 20)

Bailey and Simeonsson (1988) iterate a similar view in the presenting of a comprehensive process for family intervention. They advocate conducting interventions from the perspective of the family, and maintain that "a central premise of early intervention services is assessment of the client's unique needs and resources" (p. 28). Bailey and Simeonsson's model is also helpful in addressing the deficits in knowledge on family stress. Specifically, their model calls for a multidimensional, dynamic, view of families, with child characteristics, critical events, social networks, home environment, and many other areas being investigated. This method is advantageous because it is more likely than other models to tap pertinent areas of influence, whether scientifically confirmed or not.

Related Discussion

Though the primary purpose of this study was to investigate the effects of social support on stress, several orthogonal findings emerged. Of particular interest were the intercorrelations between mother's and father's education and income, the number of people in the home, and the number of siblings. One interpretation of this pattern of correlations could be that, though both parents typically had equal schooling, the father most often pursued the skills for which he was trained and was the financial head of the household. Similarly, the more duties for care which arose in the household, the more likely the father may have been to increase his outside work level, while the mother may have been more likely to decrease hers. These findings point to a primary caretaking role for the mother, a status noted in previous research (Loyd & Abidin, 1985). Though supporting this study's use of maternally completed measures, these results deserve a qualification. This qualification notes that these findings represent the current state of things, and should not be used to justify intervention solely with the mother, and do not judge the goodness or badness of the situation. This is in line with Vadasy et al.'s (1985) research emphasizing the changing nature of the family, the significance of the father role, and the need to increase father involvement in caretaking.

Interesting results emerged from correlations for resource and stress measures. The FSS is an example. The pattern of correlations among the three FSS measures suggested that mothers tended to have a higher average perceived helpfulness score if they had fewer sources of

support, seemingly feeling more support in each relationship when they had fewer sources of support. The question, however, of which is more comforting to the mothers, small or large networks, is unanswered. This is not necessarily an area of concern, but it could be if smaller networks are preferred and lead to a dense social network--something denoted as often inefficient, and even unhealthy (Wellman, 1981)--it can be. Kazak (1986) has observed mothers of handicapped children, in comparison to mothers of nonhandicapped children, to have high levels of density within their social networks. This question should be explored further with this group of mothers.

Additional correlations between measures added to the construct validity of those measures. For example, the total and average FSS scores significantly correlated with FRS; the average perceived support per person (FSSPER) had the higher relationship ($r = .38$ versus $r = .33$). These data suggest the similarity between these two instruments in measuring perceived adequacy of resources, and indicate the superiority of the FSSPER scoring method in this similarity. The correlations in question, however, are moderate and suggest that the FSS and FRS scores are measuring two fairly distinct constructs. This is not surprising, as the FRS, unlike the FSS, contains questions regarding the perceived adequacy of non-social types of support. The distinction in constructs can also be applied to the BDI correlations. Moderate intercorrelations between the motor, cognitive and communication domains suggested similar, yet distinct measurements. These data, along with the fact that the adaptive domain correlations were the lowest, coincide with past research (Newborg et al., 1984).

Construct validity was also found for the PSI. A moderate correlation between the Parent and Child subscales, along with high correlations between these subscales and the total score, suggested a homogeneous measure, yet one tapping several distinct constructs (Loyd & Abidin, 1985).

Strengths and Weaknesses of the Study

This study was intended to be a confirmation of past research investigating the effect of family resources on parental stress. It achieved this goal with several methodological strengths. One of these was a positive, ecological orientation founded upon respected and researched models of family functioning (i.e., ecological, Double ABCX). Many environmental aspects were taken into account, including family characteristics, child characteristics, social resources, general resources, and critical events. This comprehensiveness responds to research calling for a systems oriented, contextual, view of the family (Kazak, 1986).

Another strength of this study was its emphasis on the perception of stress, an aspect given high status by Lazarus and Folkman (1984). This was seen in the use of stress and resource measures tapping family perceptions (i.e., FSS, FRS, PSI). Of course, other variables did tap more objective constructs (e.g., education), and this is deemed quite appropriate. Brofenbrenner has pointed out the need for a healthy, methodological, balance between "perceived reality" and "objective reality" (Brofenbrenner, 1988). Further strengths of this study include the use of (a) reliable and valid instruments; (b) applied data

from a larger, methodologically sound, study; and (c) a large sample size.

This study contained several weaknesses which, if mitigated in the future, could be very beneficial to the advancement of knowledge in this field. One of these involved the lack of a true experimental design--this study utilized a regression design. Though the findings of this study agree with past research using true experimental designs (e.g. Telleen et al., 1989; Vadasy et al., 1985), questions of cause and effect cannot be assuredly answered. Another weakness of this study was its exclusive focus on the mother, something family systems theorists have labeled as atheoretical. For the present study, however, this emphasis was less of a shortsightedness than a necessity. That is, information submitted by the father was far less complete than that submitted by the mother; the mother's data were used to allow for a more complete analysis. So then, this weakness may not be so much a methodological issue as an intervention issue, perhaps urging a call to increase and monitor father involvement.

A third weakness of this study involved a lack of narrowness. That is, no variables differentiating between families were held constant. It is true that information spanning across various types of families is very important, however, it is also important to investigate the functioning of specific types of families. Foster's (1988) adjuration to compare families in different parts of their "life cycle" falls within this thinking. Finally, in assessing this study's weaknesses, and strengths, and further tying these to future implications, one must be cautious of a major problem within the field.

This is that many studies addressing the topic of handicapped children and parental stress are quite divergent. They utilize varying definitions of stress, resources, and social support, and they look at different types of children, parents, and ecological contexts. To further confuse matters, many researchers use different instruments to tap the same general construct. Although frustrating, this fact is not surprising, given previous observances of the difficulty in defining stress (Bailey & Simeonsson, 1988) and social support (DiMatteo & Hayes, 1981).

A special note should be given to the use of a large sample size in this study, something which could be viewed as a weakness. As degrees of freedom increase within a statistical analyses, the likelihood of obtaining smaller p-values, with the same data, increases, even though the data itself does not change. Thus, for example, a small difference in scores on two measurements may not be statistically significant with a small sample size, but may be with a very large sample size. This mechanism may be at work within the analyses of this study, and thus the results should be interpreted with appropriate caution.

Summary

This study examined the relationship between family resources, family characteristics, life events, and stress, in families of children with developmental disabilities. The findings suggest that perceptions of family resources are a crucial aspect of the stress response, as envisioned by the Double ABCX model. In addition,

perceptions of a variety of both basic and non-basic resources are more predictive of stress, than perceptions of a single, more narrow, type of resource (e.g., social support). Additional findings indicate a primary caretaking role for the mother and the use of smaller social networks in families of disabled children. The findings of this study suggest that an emphasis on family perceptions of specific family resources and needs would be highly beneficial in the constructing of cooperative family interventions (see Figure 2). In this way, the empowerment of families to meet their needs can be most effectively accomplished, and without the presence of an expert-oriented, fix-it, mentality.

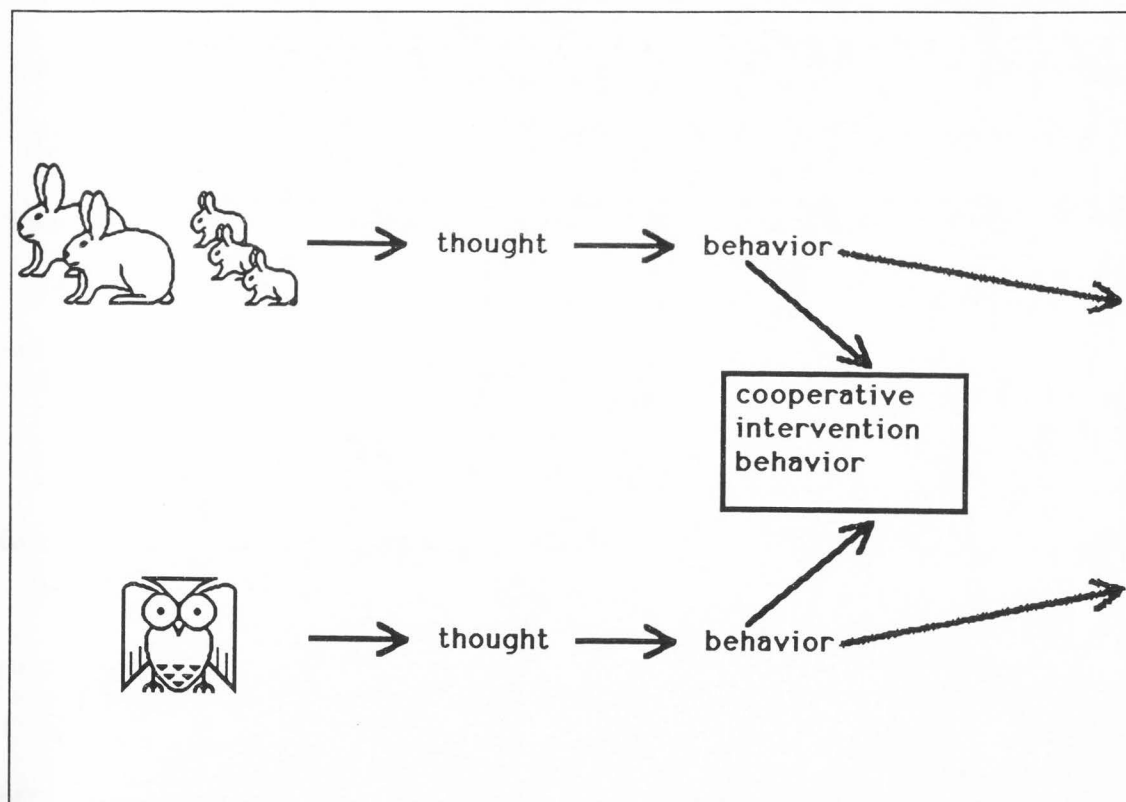


Figure 2. Conceptualization of cooperative intervention behavior.

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