

Mothers of Children with Autism or Communication Disorders: Successful Adaptation and the Double ABCX Model¹

Marie M. Bristol²

University of North Carolina at Chapel Hill

This study demonstrates the effectiveness of a modified Double ABCX or FAAR model in predicting successful adaptation—good marital adjustment, few maternal depressive symptoms, and an in-home rating of family functioning—in 45 families of autistic and communication-impaired children. The model consisted of severity of the handicap and other family stresses, family resources of cohesion and social support, family definition of the handicap, and adequacy of coping patterns. Canonical correlation and subsequent multiple regression procedures demonstrated that family adaptation was positively predicted by adequacy of social support and active coping patterns. Poorer adaptation was predicted by other family stresses, unwarranted maternal self-blame for the handicap, and maternal definition of the handicap as a family catastrophe. Findings for cohesion were mixed. Resources and beliefs were more predictive of adaptation than severity of the child's handicap.

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²Address all correspondence to Marie M. Bristol, Division TEACCH, Department of Psychiatry, CB 7180 Medical School Wing E, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-7180.

With a few notable exceptions (Bristol, 1984; Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983; Friedrich, 1977; Gallagher, Cross, & Scharfman, 1981), most research on families of developmentally disabled children has assessed the negative effects of these children on their families. Problems in adaptation and family crises such as divorce or marital problems (Bristol, Schopler, & McConaughy, 1984; Love, 1973; Price-Bonham & Addison, 1978), depression (Bradshaw & Lawton, 1978; Burden, 1980; Cummings, Bayley, & Rie, 1966; DeMyer, 1979; Tew & Laurence, 1975), and institutionalization (DeMyer & Goldberg, 1983; Lotter, 1978; Rutter, 1970) in these families have been documented.

Stress in families of autistic children has merited particular attention. Parents of these children report more stress than parents of children with other types of handicaps (Holroyd & McArthur, 1976). Although rates of institutionalization of handicapped persons have been declining, many families of autistic and autisticlike children still face such a family crisis, with estimated rates of institutionalization of autistic individuals ranging from 8% (Schopler, Mesibov, DeVellis, & Short, 1981) to 74% (Lotter, 1978). Even very recent studies (DeMyer & Goldberg, 1983) indicate that one-third of a treated group of autistic children were in residential placement before age 14 and two-thirds in residential placement after that age.

On the other hand, there is also both research and clinical evidence that many families, including families of autistic children, adapt successfully to the presence and care of a developmentally disabled child and are functioning well in spite of the increased demands (Akerley, 1975; Bristol, 1984; Burden, 1980; Grossman, 1972; Turnbull & Turnbull, 1978). At the present time, however, there is no generally accepted conceptual framework that guides research efforts in studying healthy family adaptation to handicapped children. Consequently, there are few systematic data about characteristics, resources, or beliefs that enable some families to adapt successfully to the demands of the home care of seriously handicapped children.

FAMILY ADAPTATION TO STRESS: THE DOUBLE ABCX OR FAAR MODEL

There is a growing body of research that helps to explain how any family copes with acute or chronic stress, whether the stress is a general life change, physical illness, the stress of military separation, or a natural disaster such as a tornado (Billings & Moos, 1982; Cohen & Lazarus, 1979; Hill, 1958; McCubbin, 1979; Olson & McCubbin, 1982).

It is apparent that no stressful event or stressor, including the presence or care of a handicapped child, invariably causes a family crisis. Hill (1949,

1958) proposed a classic ABCX model of family stress in which the characteristics of the stressor event (A), the family's internal crisis-meeting resources (B), and the family's definition of the stressor (C) contribute to the prevention or precipitation of a family crisis (X). The ABCX Model has been more fully defined and further developed conceptually by Burr (1973), Hansen and Johnson, (1979), and McCubbin and Patterson (1981, 1983) to deal also with postcrisis adaptation.

To expand Hill's original ABCX model, McCubbin and Patterson (1981, 1983) proposed a Double ABCX or Family Adjustment and Adaptation Response (FAAR) Model. To the original ABCX model, the Double ABCX model adds the pile-up of other family stresses that make adaptation more difficult (aA), the social and psychological resources (bB) and coping strategies (BC) that the family uses in managing potential crisis situations, the meaning the family assigns to the event (cC), and the range of both positive and negative outcomes possible.

The Double ABCX model was chosen for use in the present study because (1) it addresses postcrisis adjustment, (2) it recognizes the social and contextual nature of adaptation over time, (3) it provides for assessment of active coping as well as passive support, and (4) it addresses the possibility that healthy adaptation rather than pathology may characterize the family's response to stress.

PURPOSE

The purpose of the present study was to assess the applicability of a modified Double ABCX model to the prediction of healthy functioning in families of children with autism or severe communication disorders. The study empirically tested the magnitude of the contribution of severity of handicap to healthy family adaptation in the context of the family's other stresses and the resources and beliefs the family brings to the adaptation process. Specifically, the study tested the contribution to healthy family adaptation of severity of handicap (A), the pile-up of other stresses (aA), family cohesion (B), social support (bB), externalization of blame (C), the definition of the handicap as a family crisis (cC), and patterns of coping (BC).

The study tested four hypotheses. The first hypothesis was that the Double ABCX model, as operationalized in this study, would predict overall healthy adaptation in these families of children with autism or severe communication disorders. The second hypothesis tested was that healthy family adaptation would be positively predicted by greater family cohesion, greater adequacy of informal and formal support regarding the handicapped child, and more adequate coping patterns. The third hypothesis tested was that

healthy family adaptation would be negatively predicted by the pile-up of other stresses, maternal self-blame, and maternal definition of the handicap as a family catastrophe. The final hypothesis tested was that the pile-up of stressors, family resources, beliefs, and coping patterns would account for more of the variance in healthy family adaptation than severity of the child's handicap.

METHOD

Participants

This study was conducted as part of a larger, in-depth, longitudinal study of families of autistic and communication-impaired children. The data reported here include only maternal data relevant to the model being tested.

The participants in the present study were 45 mothers and their autistic or severely communication-impaired children, ages 2–10, recruited from consecutive new referrals to TEACCH, a free, statewide program for autistic and communication-impaired children and their families. A total of 52 families (89% of those contacted) is participating in the in-depth study described above. For purposes of testing the ABCX model, however, the sample was restricted to biological parents with complete data on all relevant measures ($N = 45$). Families were evaluated before the child or parent had received any diagnostic or intervention services from the autism program.

Participating families represented all five social status groups defined by the Hollingshead Four Factor Index of Social Status (Hollingshead, 1971). Slightly more of the families ($n = 24$) fell into the three lower social classes than into the two higher social classes ($n = 21$). The mean age of the mothers was 31 years ($SD = 5.6$, range 19 to 47). Mothers' educations ranged from junior high level through graduate school, with the average respondent having completed high school. Thirty-five of the mothers were from two-parent families; 10 were single parents. The average number of children in each family was 2.28 ($SD = 1.25$).

Children's mean age was 5.3 years ($SD = 2.02$), with a range of 2.3 to 9.7 years. Children's IQs ranged from 9 to 91, with a mean of 54 ($SD = 21.9$). Of the children, 34 were boys, 11 were girls. Twenty-seven of the children were subsequently diagnosed as autistic—score ≥ 30 on the Child Autism Rating Scale (CARS; Schopler, Reichler, DeVellis, & Daly, 1980). The remainder ($n = 18$) were diagnosed as nonautistic, communication-impaired on the basis of CARS scores of < 30 and evaluation by an interdisciplinary team.

Procedure

Before children had their initial diagnostic evaluation, mothers who agreed by telephone to participate in the study were sent packets of self-report measures to complete prior to a scheduled home visit. Home visits were made to collect the parent self-assessments and to conduct a structured maternal interview. Observer ratings of the family were then done "blind" to the maternal self-assessment reports. Psychometric assessment of the child was conducted on a separate occasion at the nearest TEACCH center.

Measures

To test the applicability of the Double ABCX model, selected measures of these A, aA, B, bB, C, and cC elements were collected in the proposed study and used as predictors of successful family adaptation (X). An overview of the Double ABCX model as operationalized in this study is shown in Table I. The choice of variables measured does not exhaust the dimensions of the ABCX components of the model. Those that were measured, however, do represent variables shown in previous research to be relevant to stress and coping in families of handicapped children.

Table I. Overview of the Double ABCX Model as Operationalized in This Study

Element of model	Summary score used in analysis
Stressor	
A	Severity of handicap
aA	Pile-up of other stresses
Resources	
B	Family resources—cohesion
bB	Social support Informal Formal
Beliefs	
C	Self-blame
cC	Catastrophe
Coping	
BC	Coping
Family adaptation	
X	Depression Marital adjustment Quality of parenting

Characteristics of the Stressor (A)

For this study, the stressor was defined as the disabled child. Severity in this study is the sum of the child's score for severity of autistic language, affect and behavior on the Child Autism Rating Scale (CARS, Schopler et al., 1980), and the child's score on an individually administered, developmentally appropriate intelligence test. For purposes of summing the scores, the child's score was reflected (i.e., reversed) so that higher scores on both instruments would reflect more severe impairment.

The Pile-Up of Other Family Stresses (aA)

As McCubbin and Patterson (1981) point out, the severity of the stress directly related to the child can be compounded by the "pile-up" of stresses either indirectly caused by the child, or by other family stresses unrelated to the child. The "pile-up" score for the present study is the sum of measures of recent life changes (modified Holmes & Rahe, 1967, Schedule of Recent Experiences) and of family limitations caused by the child's handicap. The Holroyd Questionnaire on Resources and Stress (QRS; Holroyd, 1974), Scale 9, Limits on Family Opportunity, was used to assess the extent to which the family had to pass up educational, vocational, or other self-development opportunities because of the child.

Family Resources—Cohesion and Social Support (B, bB)

Cohesion. The importance of family cohesion was indicated in the original Hill (1949) ABCX model and has been emphasized more recently by Olson and McCubbin (1982) in their discussion of the Circumplex Model of Families. Family cohesion was measured using the cohesion subscale of the Family Environment Scale (Moos & Moos, 1981).

Social Support. The Carolina Parent Support Scale (CPSS; Bristol, 1978) was used to assess parental perceptions of adequacy of support regarding their handicapped child. This scale measures the availability and helpfulness (0 = "not at all helpful" to 4 = "extremely helpful") of both informal and formal sources of support for parents of handicapped or chronically ill children. *Informal sources of support* are defined as those that do not require exchange of money or formal organization. They include the rating of availability and helpfulness of immediate and extended family friends, neighbors, and other parents of handicapped children. *Formal support* includes ratings of availability and helpfulness of support persons or services ranging from paid baby-sitters to intervention and respite care programs.

The variables Informal Support and Formal Support are the unweighted sums across the items in each scale.

Both informal and formal support scores have been shown to be inversely related to a summary score of stress on the Holroyd Questionnaire on Resources and Stress (QRS) and to distinguish high-stress and low-stress mothers of autistic children comparable in terms of demographic characteristics and severity of the child's handicap (Bristol, 1985; Bristol & Schopler, 1984).

Coping Strategies. The Coping Health Inventory for Parents (CHIP; McCubbin & Patterson, 1981), a 45-item questionnaire, was used in this study to provide information about the specific coping responses parents used in dealing with the stress of their autistic or communication-impaired children. Psychometric properties of the scale are described in detail in McCubbin and Patterson (1981). A total score for all items was used in the analyses below.

Family Definition of the Stressor (C, cC)

The Definition Scale (Bristol & DeVellis, 1980) was used in the present study to assess parental perceptions of the subjective definition of having a handicapped child. The scale consists of 11 statements arranged in a Likert-type format (1 = "strongly disagree" to 6 = "strongly agree"). A principal components analysis (with varimax rotation) of the responses of 135 parents of handicapped children confirmed the existence of three components: (1) a four-item "meaning/purpose scale" (e.g., Caring for my child is an opportunity to learn new skills); (2) a four-item self-blame Scale (e.g., My child's problems are a punishment for something someone in the family has done); and (3) a four-item "catastrophe/burden" scale (e.g., My child's having a handicap is one of the worst possible things that could happen to our family) (Ogle, 1982). For the present study, the score for self-blame was used to assess the extent to which the mother blamed herself or other family members for the child's handicap. The catastrophe or burden score was used to assess the extent to which the mother defined the child's handicap as a family catastrophe.

Family Adaptation (X)—Depression, Marital Satisfaction, and In-Home Family Adaptation

There are three aspects to successful adaptation to the disabled child as operationalized in the present study—personal, conjoint, and child-focused.

Depressive Symptoms. To measure maternal report of depressive symptoms, the Center for Epidemiologic Studies-Depression Scale (CES-D; Radloff, 1977) was used. It has been shown in previous research to distinguish between psychiatric inpatients and community samples and to have high internal consistency, acceptable test-retest reliability, and excellent concurrent validity with other self-report measures of depression (Radloff, 1977).

Marital Satisfaction. The total weighted score for the widely used Short Marital Adjustment Test (Locke & Wallace, 1959) was used as the measure of marital adjustment in the present study.

In-Home Family Adaptation. Both the measure of depressive symptoms and that of marital adjustment rely on maternal report. In order to obtain both a broader perspective on family functioning and a more objective assessment of observable attitudes and behaviors, the Home Quality Rating Scale (HQRS), Factor I, Harmony of Home and Quality of Parenting (Meyers, Mink, & Nihira, 1977), was used as the dependent measure of quality of parenting. It is completed by an in-home observer after a 1½- to 2-hour structured interview with the parent. The interview probes the child's impact on general family life. The interviewer then rates families on quality of parenting (Factor I) on seven behaviorally anchored items measuring growth promotion as a policy in child rearing, acceptance of the child, rejection of the child, observed ability of the parent to cope with the child, and adjustment and harmony in the home. This factor has been shown in previous studies (Nihira, Meyers & Mink, 1983) to have an internal consistency reliability (Cronbach's alpha) of .83 and to be related to the social competency of retarded children. In this study, a Pearson product-moment, interrater reliability correlation between two trained raters was computed for this score. For seven cases, correlations ranged from 90 to 100%, with a mean of 96%.

RESULTS

Data Analysis Plan

To test the applicability of the Double ABCX model in predicting the three measures of adaptation for these mothers, the summary scores listed in Table I for Stressor, Resources, Beliefs, and Coping were first compared for mothers of autistic and communication-impaired children. Since no significant differences were found, the groups were combined for subsequent analyses.

The significance of the overall model of multiple predictors and multiple outcome measures was first tested using canonical correlation techniques (Kshirsagar, 1972; Timm, 1975). Canonical correlation rather than the usual

multiple regression procedures was used because there were both multiple predictors and multiple outcome criteria in the study. The magnitude of the canonical correlation was then adjusted to take into account the ratio of variables to subjects, as suggested by Lawley (1959). This procedure reduces the probability of finding significant results. However, if the model proved to significantly predict successful adaptation after adjustment, one could have a high degree of confidence in the finding. Separate, order-dependent, multiple regression analyses (SAS, PROC GLM) were then conducted for each of the three dependent variables to determine if the total model predicted the separate outcomes. None of the three measures of adaptation was significantly correlated with socioeconomic status (Hollingshead, 1971, Four Factor Index of Social Status) in this study. SES, then, was not used as a predictor in the regression equations.

The Total ABCX Model

Hypothesis 1: The Double ABCX model will predict healthy adaptation in these families. (See Tables II-IV.)

The initial analysis consisted of an omnibus test (canonical correlation) of the relationship of the overall model (A—B—C—X) to determine if, in fact, child characteristics, family resources, and maternal beliefs significantly predicted the adaptation measures of maternal depression, and an observer rating of acceptance and quality of parenting with the handicapped child. (Marital adjustment was examined separately because inclusion in this omnibus test would have eliminated all single-parent families from the analyses.) The variables included in the canonical correlation are those listed in Table I (A, aA, B, bB, C, cC, and BC the predictors, and X the criterion).

The overall canonical correlation of predictor variables with the criterion was .75, which, when adjusted (Lawley, 1959) for the number of variables in relationship to subjects, yielded a canonical correlation of .67 ($F(16,70) = 3.07, p < .01$), indicating that the ABCX model significantly predicted healthy adaptation in these families of developmentally disabled children.

At this point in the analysis, although the best linear combination of the ABC variables was clearly related to the best linear combination of the outcome variables, it was not clear whether the model significantly predicted either depression or in-home ratings of adaptation per se. To determine if the individual outcomes (depression and in-home ratings of quality of parenting) could be predicted by the Double ABCX model, separate multiple regression procedures were carried out for each dependent variable. The order of variables entered was the same in all three instances, each starting with severity of handicap followed by the list of variables found in Table I. As shown in Tables II-IV, the Double ABCX model predicted quality of

Table II. Simple Pearson Product-Moment and Multiple *R* Correlations of the Double ABCX Variables with the In-Home Rating of Quality of Parenting

Variables (<i>N</i> = 45)	Simple correlation with quality of parenting <i>r</i>	Multiple <i>R</i> predictors of in-home ratings on quality of parenting		
		Unstandardized beta weights	<i>F</i>	<i>p</i> > <i>F</i>
Severity of handicap	-.13	-.018	1.38	n.s.
Pile-up of other stresses	-.32 ^a	-.004	7.47	.01
Family cohesion	.38 ^b	-.069	5.69	.02
Informal support	.53 ^c	.103	11.15	.002
Formal support	.07	-.100	1.71	n.s.
Self-blame	-.44 ^b	-.300	2.90	.10
Definition as family catastrophe	-.58 ^c	-.271	7.68	.01
Coping patterns	.58 ^b	.077	6.35	.02

^a*p* < .05.^b*p* < .01.^c*p* < .001.

parenting, depression, and marital adjustment. (See single and multiple correlations, beta weights, and *F* values in Tables II-IV.)

The total model accounted for 55% ($R^2 = .55$, $p < .0001$) of the variance in the in-home rating of quality of parenting, 33% ($R^2 = .33$, $p < .05$) of the variance in depressive symptoms, and 53% ($R^2 = .53$, $p < .01$) of the variance in marital adjustment.

In the prediction of the in-home rating of quality of parenting (Table II), all measures made a unique contribution over and above their shared variance except for severity of the child's handicap and adequacy of formal supports. It is noteworthy that active coping strategies made a significant contribution to the prediction of quality of parenting even after social support and subjective beliefs had been added to the regression. The pile-up of other family stresses made the most notable contribution to the prediction of maternal depression even after its shared variance with the other predictors was accounted for (Table III). Severity of the child's handicap, pile-up of other stresses, perceived adequacy of informal social support, and self-blame added significantly to the prediction of marital adjustment (Table IV). It should be noted that a more severely handicapped child appears to have a *less* adverse effect on the marriage than a more marginally normal and less obviously handicapped child.

Table III. Simple Pearson Product-Moment and Multiple *R* Correlations of the Double ABCX Variables with Maternal Depression

Variables (<i>N</i> = 45)	Simple correlation with quality of parenting <i>r</i>	Multiple <i>R</i> predictors of maternal depression		
		Unstandardized beta weights	<i>F</i>	<i>p</i> > <i>F</i>
Severity of handicap	-.10	-.021	.53	n.s.
Pile-up of other stresses	.53 ^c	.002	14.84	.0005
Family cohesion	-.27	.398	.31	n.s.
Informal support	-.29 ^a	-.038	.39	n.s.
Formal support	-.08	.043	.22	n.s.
Self-blame	.22	.379	.74	n.s.
Definition as family catastrophe	.29	.501	1.10	n.s.
Coping patterns	-.26	-.003	.001	n.s.

^a*p* < .05.
^b*p* < .01.
^c*p* < .001.

Table IV. Simple Pearson Product-Moment and Multiple *R* Correlations of the Double ABC Variables with Reported Marital Adjustment

Variables (<i>N</i> = 35)	Simple correlations with marital adjustment <i>r</i>	Multiple <i>R</i> predictors of marital adjustment		
		Unstandardized beta weights	<i>F</i>	<i>p</i> > <i>F</i>
Severity of handicap	.24	.221	3.17	.09
Pile-up of other stresses	-.49 ^b	-.092	12.34	.002
Family cohesion	.32	-2.42	.37	n.s.
Informal support	.53 ^c	2.15	9.05	.006
Formal support	.11	.411	.94	n.s.
Self-blame	-.40 ^b	-3.536	3.04	.09
Definition as family catastrophe	-.23	-.081	.001	n.s.
Coping patterns	.31	-.042	.03	n.s.

^a*p* < .05.
^b*p* < .01.
^c*p* < .001.

Hypothesis 2: Healthy family adaptation will be positively predicted by greater family cohesion, greater adequacy of informal and formal support, and more adequate coping patterns.

This hypothesis was supported unequivocally for only two of the four predictor variables. As predicted, quality of parenting as rated in the home was positively predicted by greater perceived adequacy of informal social support and more adequate coping patterns (see Table II).

Although the simple correlation of cohesion with adaptation was positive (i.e., more supportive or cohesive families were rated as adapting better to the child and providing a higher quality of parenting), in the context of the multiple predictors, greater family cohesion was predictive of less, not more, healthy family adaptation ratings. Although cohesion did not make a unique contribution to the prediction of the other two dependent variables, the direction of the relationship was the same in all three cases; i.e., greater cohesion was related to more negative family adaptation. Adding variables to the equation one at a time, it was clear that the sign of the relationship of cohesion to adaptation changed from positive to negative *only* in the presence of the measure of informal social support from immediate and extended family and friends. Formal support as measured in this study was not a significant predictor of any of the measures of adaptation.

Hypothesis 3: Healthy family adaptation will be negatively predicted by severity of the child's handicap, pile-up of other stresses, maternal self-blame, and maternal definition of the handicap as a family catastrophe. (See Tables II-IV.)

The inverse relationship between each of the latter three variables (other family stresses, maternal self-blame, and definition as family catastrophe) and quality of parenting was demonstrated. Families who had more "other" family stresses reported that they were more depressed and less happily married, and, in fact, were rated by interviewers as adapting less well to their child. Mothers who blamed themselves or another family member for their child's handicap reported that they were less happily married and were rated by interviewers as adapting less well to their child. Similarly, mothers who defined having a handicapped child as a catastrophe (i.e., agreed with statements such as "Having a handicapped child is the worst possible thing that can happen to a family") were more apt to receive low ratings on in-home quality of parenting. Contrary to predictions, severity of the child's handicap was not a significant predictor of any of the three measures of adaptation. In one case, where it approached significance (marital adjustment), greater severity was related to better adaptation.

Hypothesis 4: Pile-up of stressors, family resources, beliefs, and coping patterns will account for more of the variance in healthy family adaptation than severity of handicap.

Over and above the shared variance with the other predictors, severity of handicap did not add significantly to the prediction either of maternal depression or of the in-home rating of quality of parenting. In the single case where it made a significant additional contribution (marital adjustment), greater severity was associated with better adaptation. (See Tables II-IV for R^2 values, including severity of handicap.) In the prediction of the home rating, knowledge of severity of the handicap added only 1½% to the prediction gained from the model without severity (without severity, $R^2 = .528$, $F(6, 38) = 7.10$, $p < .001$). Severity of handicap contributed even less (.2%) to the prediction of depression without severity (R^2 without severity = .333, $F(6, 38)$, $p < .01$). It added 3% to the R^2 for marital adjustment over that accounted for without severity (R^2 without = .50, $F(7, 27) = 3.89$, $p < .004$).

DISCUSSION

The results of the study indicate that the Double ABCX or FAAR model, as operationalized in this study, is an effective way of conceptualizing the processes of adaptation in families of autistic or communication-impaired children. Elements of the stressor (A, aA), family resources (B, bB), and family definition of the stressful event (C, cC) did significantly predict all three measures of family adaptation (X).

The strength of the model is demonstrated not only in its prediction of maternal reports of depressive symptoms and marital adjustment but in its prediction of more than half the variance in in-home ratings of family adaptation made by interviewers "blind" to the self-assessment results. The magnitude and level of significance of the predictions in spite of the small sample size attests to the robustness of the findings.

The study hypotheses regarding specific predictors of healthy adaptation received more mixed support in the study. As predicted, both perceived adequacy of informal social support and coping patterns were related to healthier adaptation. Mothers who had more adequate support from spouses, immediate and extended family, and other parents reported happier marriages, and were rated by interviewers as having better family adaptation.

The fact that both the perceived helpfulness of informal support *and* coping patterns made independent contributions to the predictions of healthy adaptation reinforces McCubbin's (1979) contention that active coping strategies play a role that goes beyond the passive receipt of support. The fact

that coping patterns added significantly to the prediction of the in-home rating of family adaptation, even after both social supports and subjective beliefs had been entered, provides substantial confirmation of their unique contribution.

Also consistent with predictions, the magnitude of other family stresses contributed to the prediction of marital adjustment and the in-home rating of adaptation and was the single best predictor of maternal depression. The fact that neither social support nor coping strategies appeared to buffer the effect of life stressors on depression may relate to the order of entry of these variables into the regression analysis. On the other hand, it may suggest that some internal attribute of the parent such as self-esteem or locus of control mediates social support linkages, use of particular coping strategies, and their subsequent link with depression. This would be a fruitful area for future research with similar populations.

Again as predicted, negative maternal beliefs appeared to affect adaptation, and adaptation was more closely related to resources and beliefs than to severity of the child's handicap. Mothers who did not blame themselves or other family members for the child's handicap reported happier marriages, and were rated by trained observers as having better family adaptation to the disabled child. This is consistent with the concept of "externalization of blame," which is an important component of the definition of the stressor in Hill's original conceptualization of the model and in Burr's (1973) and Hansen and Johnson's (1979) later explications of family stress theory.

Contrary to predictions, somewhat paradoxical results were found for the relationships of severity, formal support, and cohesion to healthy adaptation. Mothers of more severely handicapped children reported happier marriages than parents with marginally normal children. This probably does not mean that more retarded children are less stressful than normal children. It is more likely that it reflects the prediagnostic timing of the study and the role of ambiguity in coping with stress. Hansen and Johnson (1979) have reviewed at length the effects of ambiguity on family communication, coorientation, and interaction patterns. In the present study, before formal evaluation of the child, more severely affected children are, in all likelihood, more obviously handicapped and less apt to generate parental disagreements about whether the child is actually handicapped.

Formal support, as measured in this study, was not a unique predictor of any of the three measures of adaptation. However, these parents were evaluated at the time of referral, *before* they had received TEACCH services and when most had minimal contact with formal service providers.

When considered in isolation, greater cohesion was related to better family adaptation. However, when cohesion was included in the multiple regression equations with informal support from family, friends, and relatives, cohesion appears to be negatively related to adaptation. Whatever variance it shares with social support, then, indicates that supportive relationships

are important for adaptation, but that some additional factor in cohesion that goes beyond support may be a negative factor in adaptation. The finding that greater cohesion was associated with less healthy rather than more healthy ratings of adaptation is consistent with the notion of a circumplex (Olson & McCubbin, 1982) model in which excessive cohesion becomes enmeshment and interferes with healthy family adaptation. The findings regarding formal support and cohesion indicate the complex nature of support that may at times be a resource and at other times a source of stress.

Mothers of autistic children were comparable to mothers of communication-impaired children on all family adaptation measures, but it is not clear to what extent the results of this study are generalizable to other types of handicapping conditions.

In addition, successful family adaptation to any type of stressor is a process that changes over time. Analysis of longitudinal data is necessary before drawing any final conclusions regarding successful outcomes for these families.

On the level of intervention, the model has clear heuristic value. The findings regarding the importance of support, coping strategies, and subjective beliefs suggest areas that should be targets for practitioners designing intervention programs for autistic or communication-impaired children. The results suggest that merely changing the child's behavior may be insufficient in assisting families, especially in families of the most severely handicapped children (see also Wahler, 1980).

The fact that obviousness of the child's handicap (in terms of severity) was related to lower stress before formal evaluation supports the need for early identification of the child's handicap and early parent education to minimize disagreements regarding the child. Similarly, the contribution of unwarranted maternal self-blame to marital adjustment, and to the home rating of family adaptation, also emphasizes the need for early diagnosis and parent education to prevent such parental misconceptions from interfering with successful family adaptation to the child. Results of this study suggest that previous approaches to autism that mistakenly blamed parents may have contributed to marital problems and parental difficulty in dealing with the child.

Other child characteristics, such as child age and gender, are potentially important contributors. In related research (Bristol, 1987), boys have been found to have a more negative impact on marriages. Age effects may be curvilinear, with increased age associated with better family functioning until midadolescence (Bristol, 1987). More in-depth study of both age and gender effects is warranted.

Finally, the results indicate that studying successful adaptation rather than pathology in families offers a fruitful avenue for future research and clinical practice. There is much that successful families can teach us that will help us in assisting those families not coping as well. It is important to con-

tinue to explore research methods that approach this interface between research and clinical practice.

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