

## Hardiness and Social Support as Predictors of Stress in Mothers of Typical Children, Children with Autism, and Children with Mental Retardation

Mary Jane Weiss

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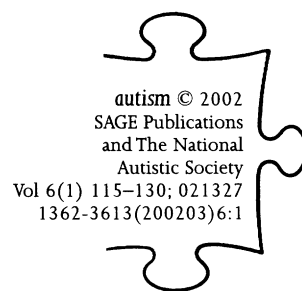
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# Hardiness and social support as predictors of stress in mothers of typical children, children with autism, and children with mental retardation



MARY JANE WEISS     Rutgers, The State University of New Jersey,  
USA

**ABSTRACT** This study assessed the effects of social support and hardiness on the level of stress in mothers of typical children and children with developmental disabilities. One hundred and twenty mothers participated (40 mothers of children with autism, 40 mothers of children with mental retardation, and 40 mothers of typically developing children). Results indicated significant group differences in ratings of depression, anxiety, somatic complaints and burnout. Regression analyses were conducted to determine the best predictors of the dependent measures. Both hardiness and social support were predictive of successful adaptation. The relationships among hardiness, support and coping are discussed.

## KEYWORDS

autism;  
parental  
stress; social  
support

**ADDRESS** Correspondence should be addressed to: MARY JANE WEISS, Rutgers, The State University of New Jersey, Douglass Developmental Disabilities Center, 25 Gibbons Circle, New Brunswick, NJ 08901-8512. e-mail: [mjweiss@home.com](mailto:mjweiss@home.com)

## Introduction

Parenting a child with a developmental disability is stressful for many reasons (Moes, 1996). It is a long-term, intense stressor that requires both short-term and long-term problem solving skills, and it is a very ambiguous stressor with issues such as the disorder's course and prognosis often unclear. Most parents feel that their experiences are uniquely and inherently different from those of their family and friends (Marsh, 1993), and this is reflected in a sense of isolation (Seligman and Darling, 1997). Though not all parents of children with autism or mental retardation report high levels of stress, for others the sense of difference and isolation can lead to major problems in this area.

Parents of children with disabilities may experience fatigue, depression, lowered self-esteem, and interpersonal dissatisfaction (Bristol, 1984; Dyson and Fewell, 1986; Figley, 1983; Houser, 1987; Lyon and Preis, 1983; Marcus, 1977; Richman, 1977; Sobotor, 1989). Mothers describe themselves as unable to pursue personal goals and as having little free time (Holroyd, 1974), and they report ambivalence and grief over the amount of time devoted to the disabled child at their own expense and that of the family (DeMyer, 1979). Mothers of children with disabilities also experience increased moodiness, are more prone to illness (Holroyd, 1974), are acutely affected by the degree to which their child is accepted or rejected by the community (Bristol, 1984; Holroyd, 1974), rate the behaviors of their child as stressful (Freeman et al., 1991), and report considerable family disharmony (Holroyd, 1974).

The nature of the child's disability also affects family stress. Thus, mothers of children with autism experience more stress than mothers of children with mental retardation (Donovan, 1988) or children with cystic fibrosis, a chronic and fatal physical illness (Bouma and Schweitzer, 1990). Whereas the child with cystic fibrosis is emotionally responsive, the child with autism may be aloof or avoidant of attempts at affection, which may lead to increased stress in their mothers. In addition, mothers of children with autism have been found to have a characteristic stress profile (Koegel et al., 1992). This profile suggests that concerns over child dependency and limited family opportunities are the primary contributors to maternal stress. Fathers and mothers both express concerns about their child's future, about their child's independence and about acceptance in the community (Moes et al., 1992; Rodrique et al., 1992). Confusion regarding the child's true intellectual ability and the presence of isolated skills may make it difficult for parents to assess their child's cognitive ability and potential (Bouma and Schweitzer, 1990; Koegel et al., 1992).

The stress ameliorating effect of social support has been demonstrated repeatedly (e.g. Boyce et al., 1991; Byrne and Cunningham, 1985; Johnson and Sarason, 1978; McCubbin, 1979). A series of studies by Bristol (1984) with mothers of children with autism found that women experiencing the least stress were receiving the greatest support, particularly from their spouses and relatives. Support from partners can have powerful buffering effects (Kazak and Marvin, 1984; Turnbull and Turnbull, 1990).

Support from professionals also aids in adaptation to stress (e.g. Farran and Sparling, 1988). Bristol (1984) found that differences in the receipt of formal services were correlated with differing levels of stress in families of children with autism. One element of social support that may be particularly relevant is the perception of the availability of support. While Honig and Winger (1997) found that the severity of the child's disability was

related to reported stress, they also found that professional support services made a measurable difference in maternal perceptions of stress. For these mothers, the perception of social support appears to moderate the extent to which parenting stress leads to dysphoria (Wolf et al., 1989).

In their discussion of social support networks, Kazak and Marvin (1984) and Kazak and Wilcox (1984) stress the importance of examining the social support network, the degree of isolation, and the adequacy of formal support services. Extended family, especially grandparents, plays a central role in the family's adaptation and can be a source of practical help and emotional support (Seligman and Darling, 1997).

Coping strategies refer to conscious cognitive or behavioral efforts by the individual to alleviate distress associated with, and emanating from, an event (Cohen and Lazarus, 1979; Lazarus and Folkman, 1984). Instrumental strategies such as parent training and information programs focus on implementing change directly in persons or the environment (Bristol, 1984; 1985; 1986; Bristol and Schopler, 1983; Harris, 1982; 1984). By contrast, palliative strategies include such things as holding philosophically comforting views of life and searching for satisfaction in other areas of life. Both instrumental and palliative strategies have been found helpful to families (Albanese et al., 1996). Families using palliative strategies, however, report coping more easily with the stresses of a child with a disability than those not using these strategies (Bristol and Schopler, 1983; Gallagher et al., 1981; Venters, 1982).

There is a substantial body of research documenting the ability of individuals to regain a sense of mastery over their circumstances following a traumatic or unpredictably stressful event (Seligman, 1991). In addition, many people describe finding meaning in their misfortune and being strengthened through the process of adaptation to stress. Beliefs, attitudes and perceptions can mitigate and ameliorate feelings of victimization, hopelessness and helplessness (Affleck and Tennen, 1993).

One model of coping identifies personal variables as important in predicting coping ability (Hill, 1949; 1958; McCubbin, 1979; McCubbin and Patterson, 1983a). This 'ABCX model' of the effect of a stressor (A) emphasizes the role of crisis-meeting resources (B), and the definition of the event (C), as important factors in the response of a family to a stressor and the development of a crisis (X). Crisis-meeting resources include formal support, informal support and individual characteristics. The definition of the event refers to the subjective meaning given to the stressor (Wikler, 1986).

The 'double ABCX model' expands the C factor to the CC factor (McCubbin and Patterson, 1982; 1983a; 1983b). The CC factor is defined as both the family's perception of the original stressor, and the cumulative

effect of other stressors and the perception of resources available to the family. In this expanded model, more emphasis is placed on finding meaning in stressful circumstances (McCubbin and Patterson, 1982).

One line of research examining the role of such individual factors in moderating stress has concentrated on the personality attribute known as 'hardiness' (Ganellen and Blaney, 1984; Kobasa, 1979). Individuals with hardy personalities remain healthy after experiencing high degrees of stress because of a constellation of characteristics that differentiate them from those who are more vulnerable (Ganellen and Blaney, 1984). These characteristics, including commitment, challenge and control, are consistent with other theoretical models of coping (e.g. Behr and Murphy, 1993; McCubbin and Patterson, 1983b), which focus on cognitions and adaptive qualities.

Commitment refers to a general sense of purpose and a tendency to be an active and involved individual. Challenge refers to the perception of events as opportunities. Control refers to the degree of influence one perceives over events in one's life. These dimensions capture the essence of hardiness and are related to characteristics which have been theoretically discussed in the cognitive coping literature as well.

In a study on the roles of hardiness and social support in the amelioration of stress on mothers of children with autism, Gill and Harris (1991) found a significant main effect for hardiness, and that hardiness had a main effect for each dependent variable; there was no main effect for social support. Regression analyses indicated that depressive symptoms were predicted by both hardiness and social support, and that fewer somatic complaints were predicted by greater hardiness. They also found that hardiness and social support covaried with similar levels of both variables within individuals but it was not possible to assess the causal direction of this relationship (Gill and Harris, 1991).

The present study was designed further to assess the roles of hardiness and social support in the amelioration of stress (i.e. depression, anxiety and burnout) for mothers of typical children and mothers of children with developmental disabilities. Hardiness seems to have particular relevance as a coping variable as it incorporates specific palliative coping strategies and adaptive cognitive perceptual elements. Based on the existing literature, it was hypothesized that mothers of children with autism would report greater stress than would mothers of children with mental retardation or mothers of typically developing children. Mothers of typically developing children were expected to describe the least stress. In addition, it was expected that both support and hardiness would ameliorate stress for individuals, with hardiness as a primary stress-reducing variable.

## Method

### Subjects

There were three groups of participants in this study: 40 mothers of children with autism; 40 mothers of children with mental retardation; and 40 mothers of typically developing children. The mothers, who ranged in age from 24 to 48, were recruited from two special schools and a statewide developmental disabilities conference. The overall response rate from the two schools was 50 percent. Mothers of children with mental retardation were recruited from a service-providing organization (response rate of 62 percent) and a statewide developmental disabilities conference. Mothers of typically developing children were recruited through a parent networking organization (response rate of 61 percent). There were no significant differences among groups on demographic variables of child's age, maternal age, maternal education or family income. The vast majority of respondents were married (39/40 for autism, 38/40 for mental retardation and 40/40 for typical). The samples were generally middle class families and nearly all were Caucasian. Children with autism and mental retardation had been diagnosed using DSM-III-R (American Psychiatric Association, 1987) criteria prior to their participation in this study (the present study is based on archival data and the DSM-III-R was still in use at the time of the participant selection). All of the children with autism and mental retardation were receiving services based on these independent diagnoses. All of the children were between the ages of 2 and 7 years. While there is often overlap of mental retardation and autism, the children with autism did not have a primary diagnosis of mental retardation and the children with mental retardation did not have an autism diagnosis or prominent autistic characteristics.

### Procedure

Packets of questionnaires were mailed or given to mothers with a brief covering letter explaining the rationale for the study. The packet included measures to assess social support, hardiness, and symptoms of negative effects of stress, as well as a demographic and familial information sheet.

Three measures of informal social support were administered. The first, the Interpersonal Support Evaluation List (ISEL; Cohen and Hoberman, 1983), measures the perceived availability of social support with four independent subscales measuring support functions. Two subscales were employed in this study: the appraisal scale and the self-esteem scale. The appraisal subscale measures the perceived availability of someone with whom to discuss one's problems. The self-esteem subscale measures how one perceives one's positive qualities in relation to those of others. The

internal reliabilities of these subscales are good: 0.77 for the appraisal subscale and 0.68 for the self-esteem subscale (Cohen and Hoberman, 1983).

The second measure of informal social support in the present study assessed receipt of functional social support (i.e. needed assistance actually delivered by others) during the preceding month. This 10 item measure, developed by Ferrari (1982) for use with parents of chronically ill children, is a modification of the 40 item version of the Inventory of Socially Supportive Behavior (ISSB: Barrera et al., 1981). This modified version of the ISSB has a test-retest reliability of 0.64.

The third measure of informal support was the Locke–Wallace Marital Adjustment Test (Kimmel and Van der Veen, 1974; Locke and Wallace, 1959), which assesses global marital satisfaction and degrees of marital harmony in a variety of areas.

Access to formal support services was also assessed with a six item questionnaire tapping the degree to which parents of children with disabilities had access to medical, educational, informational and support services (Gill, 1988). This questionnaire was modified slightly for parents of typically developing children.

Hardiness was assessed by the Hardiness Test (Maddi, 1986; Maddi et al., 1979), a 50 item self-report measure which provides a total score and subscale scores within the three dimensions of hardiness: *control*, measured by items assessing locus of control and feelings of powerlessness; *commitment*, measured by items assessing one's sense of purpose and one's adherence to values; and *challenge*, measured by items assessing vegetativeness, adventurousness and the perception of events as opportunities. Reported reliability estimates are over 0.90 for the total score and over 0.70 for subscale scores (Maddi, 1986; 1989).

The dependent measures for this study assessed the presence of negative psychological and physiological effects of stress. The Beck Depression Inventory (BDI: Beck, 1978) is a 21 item instrument which assesses symptoms of depression, including feelings of hopelessness, loss of interest in activities, and changes in eating and sleeping patterns. Scores on the BDI have been shown to be internally consistent and stable over time. Comparisons between scores and judgments by diagnosticians indicate a high degree of validity (Beck et al., 1961).

Anxiety-related symptoms were assessed using seven questions from a questionnaire developed by the US Department of Health, Education and Welfare (Caplan et al., 1975). Mothers indicated how often they experienced emotions such as jitteriness, nervousness, irritability or anger.

Stress-related somatic symptoms were assessed using 10 questions developed by the US Department of Health, Education and Welfare (Caplan et al., 1975). Participants indicated how often (over the past month) they



had experienced various somatic problems such as sweaty hands, tachycardia and shortness of breath.

Parental burnout was assessed through a modified version of the Maslach Burnout Inventory (Maslach and Jackson, 1981). This 22 item questionnaire has been factor analyzed into three subscales: emotional exhaustion (e.g. 'I feel emotionally drained from being a parent'); depersonalization (e.g. 'I feel I treat my child as if he/she were an impersonal object'); and personal accomplishment (e.g. 'I deal very effectively with the problems of my child').

## Results

### Group differences on dependent measures

A MANOVA indicated significant between-group differences overall ( $F = 6.55$ ,  $p < 0.01$ ) and on all dependent variables (see Table 1).

The three groups differed on depressive symptoms ( $F = 15.95$ ,  $p < 0.001$ ), anxiety symptoms ( $F = 3.45$ ,  $p < 0.04$ ), somatic complaints ( $F = 13.06$ ,  $p < 0.001$ ), emotional exhaustion ( $F = 3.83$ ,  $p < 0.03$ ), depersonalization ( $F = 6.16$ ,  $p < 0.01$ ) and feelings of personal accomplishment ( $F = 78.69$ ,  $p < 0.001$ ).

**Table 1** Summary of group differences

Dependent variable	Group	Mean (and SD)	F	p
Depression	Typical	9.2 (2.16)	15.95	< 0.001
	MR	15.5 (2.81)		
	Autistic	19.6 (2.4)		
Anxiety	Typical	13.2 (2.65)	3.45	0.035
	MR	14.4 (2.82)		
	Autistic	15.18 (2.6)		
Somatic complaints	Typical	13.41 (2.55)	13.06	< 0.001
	MR	15.09 (3.15)		
	Autistic	17.02 (2.7)		
Emotional exhaustion (MBI)	Typical	23.75 (2.95)	3.83	0.024
	MR	27.75 (2.42)		
	Autistic	31.26 (2.26)		
Depersonalization (MBI)	Typical	5.23 (1.4)	6.16	0.003
	MR	6.25 (1.64)		
	Autistic	9.53 (1.7)		
Personal accomplishment (MBI)	Typical	8.9 (1.83)	78.69	< 0.001
	MR	20.5 (3.09)		
	Autistic	21.98 (2.45)		



### **Group differences on social support and hardiness**

There were significant differences among respondents on hardiness (total score) and social support ( $F = 15.95$ ,  $p < 0.04$ ). Mothers of typically developing children exhibited the most hardy attitudes ( $M = 75$ ). Mothers of children with mental retardation were less hardy ( $M = 66$ ), but were still within one standard deviation of the norm. Mothers of children with autism had the least hardy attitudes ( $M = 62$ ), falling more than one standard deviation below the norm for women.

On the Interpersonal Support Evaluation List (ISEL), there was a significant difference between groups ( $F = 10.58$ ,  $p < 0.002$ ). Mothers of typically developing children perceived emotional support and esteem-boosting friendship as most available ( $M = 9.3$ ). Mothers of children with mental retardation perceived these things as somewhat available ( $M = 8.0$ ), and mothers of children with autism perceived them to be considerably less available ( $M = 7.0$ ).

### **Prediction of the dependent variables**

Stepwise regressions were computed to assess the best predictors of each dependent variable. The first variable was selected in forward procedures. If the variable failed to meet entry requirements, the procedure was terminated. Additional variables were selected based on highest partial correlations. Both independent and dependent variables were allowed into the predictive equations owing to the lack of clarity regarding variables contributing to the stress experienced in these families.

The results of the regression analysis for the prediction of depressive symptoms identified several predictors. Participants who reported high degrees of personal accomplishment in parenting reported low degrees of depression (MBI,  $r = 0.75$ ). In addition, mothers who reported high self-esteem and a high degree of social support reported lower levels of depression than mothers with low self-esteem and few available supports (ISEL,  $r = 0.33$ ). Mothers who believed that they had a good deal of control over events in their lives reported lower levels of depression than subjects who felt more helpless (control subscale of HQ,  $m = (0.59)$ ). Additionally, mothers of children with autism tended to be more depressed than mothers of children with mental retardation, who were in turn more depressed than mothers of typically developing children ( $r = 0.27$ ). Finally, mothers who experienced low levels of anxiety also tended to experience low levels of depression ( $r = 0.53$ , multiple  $R = 0.839$ ,  $p < 0.001$ ).

The results of the regression analysis for the prediction of anxiety symptoms indicated that anxiety was predicted by: the degree of emotional exhaustion ( $r = 0.60$ ); the degree of depressive symptoms ( $r = 0.53$ ); and the degree to which an individual viewed events as challenges ( $r = -0.24$ ,

multiple  $R = 0.676$ ,  $p < 0.001$ ). Specifically, individuals tended to have higher levels of anxiety when they experienced high levels of emotional exhaustion and depression. Respondents had lower levels of anxiety when their scores on the challenge subscale of the Hardiness Test were high. These individuals tended to view events as challenging opportunities.

Regression analyses for the prediction of somatic symptoms indicated that there were four predictive variables for this dependent measure (multiple  $R = 0.604$ ,  $p < 0.001$ ). Marital adjustment ( $r = -0.47$ ), sense of accomplishment in parenting ( $r = -0.44$ ) and educational achievement ( $r = -0.18$ ) were inversely correlated with somatic symptoms. Occupational status was also related to somatic symptoms ( $r = -0.21$ ), and mothers who worked full-time in professional jobs experienced more somatic symptoms than mothers who worked part-time or stayed at home.

Regression analyses were also conducted for the prediction of parental burnout measures. Analyses for the prediction of emotional exhaustion identified three predictive variables: depersonalization in parenting, anxiety symptoms, and a sense of personal accomplishment in parenting (multiple  $R = 0.801$ ,  $p < 0.001$ ). Mothers who experienced high levels of depersonalization or anxiety also reported high levels of emotional exhaustion. Parents with a strong sense of personal accomplishment in parenting reported less emotional exhaustion than parents who felt less efficacious in parenting.

Depersonalization was predicted by emotional exhaustion and by the total hardiness score (multiple  $R = 0.726$ ,  $p < 0.001$ ). Emotional exhaustion and depersonalization were positively correlated. Feelings of depersonalization were negatively correlated with the total score from the Hardiness Test. Respondents with hardy attributes and attitudes were less likely to report feelings of depersonalization in relation to their children.

Personal accomplishment in parenting was predicted by five variables: depression, emotional exhaustion, group assignment, the score on the self-esteem subscale of the ISEL, and marital adjustment (multiple  $R = 0.842$ ,  $p < 0.001$ ). Depression and emotional exhaustion were inversely correlated with personal accomplishment. Parents of children with special needs tended to report less personal accomplishment than parents of typically developing children. Individuals with low scores on the self-esteem subscale of the ISEL also reported low levels of accomplishment in parenting. These women, who had negative self-evaluations and who did not perceive social support as readily available, reported a lowered sense of efficacy in parenting than mothers with higher self-esteem who perceived support as more available. Finally, mothers with low marital satisfaction reported lower levels of efficacy in parenting than mothers who were more satisfied in their marital relationships (see Table 2 for individual correlations for each of the burnout subscales).

**Table 2 Predictors of scores on the subscales of the Maslach Burnout Inventory**

<i>Dependent variable</i>	<i>Predictor</i>	<i>Correlation</i>	<i>Multiple R</i>	<i>P</i>
Emotional exhaustion	Depression	0.59	0.801	< 0.001
	Anxiety	0.6		
	Personal accomplishment	0.66		
Depersonalization	Emotional exhaustion	0.7	0.726	< 0.001
	Total score hardiness (HQ)	−0.48		
Personal accomplishment	Depression	0.75	0.842	< 0.001
	Emotional exhaustion	0.66		
	Group	0.45		
	Self-esteem (ISEL)	−0.31		
	Marital adjustment (LVV MAT)	−0.49		

**Table 3 The relationship between hardiness and perceived social support**

<i>ISEL subscales</i>	<i>Hardiness dimensions</i>			<i>Total</i>
	<i>Commitment</i>	<i>Control</i>	<i>Challenge</i>	
<i>Self-esteem</i>				
Correlation	0.226	0.184	0.148	0.199
( <i>p</i> -values)	(0.006)	(0.022)	(0.054)	(0.015)
<i>Appraisal</i>				
Correlation	0.276	0.256	0.159	0.244
( <i>p</i> -values)	(0.001)	(0.002)	(0.041)	(0.004)
<i>Total</i>				
Correlation	0.306	0.272	0.185	0.27
( <i>p</i> -values)	(0.001)	(0.001)	(0.022)	(0.001)

### **Correlation between hardiness and social support**

As shown in Table 3, the correlations between all hardiness subscales and all subscales of the ISEL indicate that women who expressed hardy beliefs and attitudes also perceived support as available.

### **Discussion**

Results of the present study concur with previous findings that parents of children with autism experience more negative effects of stress than parents of children with mental retardation or parents of typically developing children (Farran et al., 1986; Holroyd and McArthur, 1976). While there

was variability within groups and overlap in the ranges of scores between groups, there was a propensity toward greater levels of distress in mothers of children with special needs, with the most distress reported by mothers of children with autism. This pattern was consistent across all dependent measures.

Mothers of children with autism had a mean score on the Beck Depression Inventory (Beck, 1978) indicative of moderate depressive symptomatology, while mothers of children with mental retardation reported mild depressive symptoms on average and mothers of typically developing children fell into the non-depressed category. A similar pattern emerged for anxiety and somatic symptoms. Mothers of children with autism experienced more symptoms than mothers of children with mental retardation or mothers of typically developing children. On the burnout measures, mothers of children with autism also reported more distress than mothers of children with mental retardation and mothers of typically developing children.

In examining the predictive power of the independent variables, several patterns emerged. The control, challenge and total hardiness scores were predictive of depression, anxiety and depersonalization, respectively. That is, the more hardy individuals were the less prone to depression, anxiety and feelings of depersonalization. Esteem-boosting friendship (ISEL, self-esteem subscale) was predictive of less depression and feelings of greater personal accomplishment in parenting. Perceived social support from the spouse was predictive of fewer somatic complaints and greater feelings of accomplishment in parenting. The results support the importance of both social support and perceptual factors in fostering adaptation to stress. In terms of support, perceived availability appears to be more important than the actual receipt of support. In addition, support that enhances feelings of self-efficacy is most helpful. Finally, the importance of the marital unit as a source of support is highlighted.

In terms of individual characteristics, coping appears to be boosted by perceptions of control and self-efficacy and by a general sense of purpose. This is consistent with the hypotheses of the 'double ABCX model' (McCubbin and Patterson, 1982; 1983a; 1983b). It is also consistent with the cognitive adaptation themes identified by Behr and Murphy (1993).

The ameliorating effects of social support and hardiness found by Gill and Harris (1991) were replicated in part by the present study. Both studies support the roles of social support and individual characteristics such as hardiness in ameliorating stress-related symptoms. Specifically, components of hardiness were predictive of depression, anxiety and depersonalization. Elements of social support were related to depression and to feelings of efficacy in parenting.

Hardiness and social support were also related. Individuals who expressed hardy attitudes also perceived support as available to them. While the causal link is unclear, the relationship is interesting, and may have both theoretical and pragmatic implications. This is consistent with the reports of Kazak and Marvin (1984) and Kazak and Wilcox (1984) that emphasize that the availability of support from multiple sources bolsters coping and the sense of efficacy in meeting the demands of stressful circumstances.

There are several significant limitations to this study. It should be noted that the sample overwhelmingly includes intact and middle class families. It is likely that stress would be higher in single parent families and in families of lower socioeconomic status. This study cannot shed light on the experiences of those groups. It should also be noted that the present study does not directly address the impact of paternal support and support from grandparents. It may well be that differences in these types of support existed in these families and affected the experience of maternal stress. Perhaps one of the most serious limitations of the study is the absence of specific IQ data for the children in the autism and MR groups. A child's degree of mental retardation may significantly influence the stress experienced by the family members, and may have influenced results in important ways. However, these data were not available for most of the children. Another serious limitation is the use of multiple assessment measures. This may have created some spurious correlations.

Overall, however, the results support interactive models of coping, which suggest that adaptive capacity is shaped by both social support and personal factors. The findings indicate that both social support and individual characteristics aid effective coping and reduce the deleterious effects of stress.

The importance of crisis-meeting resources (social supports, personality factors) in fostering coping is also supported. In addition, the importance of an individual's cognitive/perceptual appraisal of a stressor, as measured by the challenge dimension of the Hardiness Test (Maddi et al., 1979) is supported. This is consistent with the ABCX model's definition of a stressor, and with the predictions and emphases of other models (Farran et al., 1986; McCubbin and Patterson, 1983a; 1983b; Wikler, 1986). The specific ways in which social support and individual characteristics, separately and together, aid coping remain to be determined.

In future research, efforts should be made to learn whether adaptive cognitive styles can be taught and maintained in this group. An important question concerns the degree to which the effects of stress associated with raising a child with a developmental disability could be reduced through cognitive interventions. In particular, it may be helpful to teach families

'hardy' strategies such as investing in advocacy, challenging pessimistic assumptions, and more effective parent-child interaction skills. A longitudinal study might further elucidate the relationships between social support, hardiness and coping over time. Examining these variables in populations of parents with children of varying ages and disabilities might help to delineate primary stress reduction variables and to identify salient needs.

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