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Contributions to depression in Latina mothers with and without children with retardation: Implications for caregiving

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# Contributions to Depression in Latina Mothers With and Without Children With Retardation: Implications for Caregiving\*

Jan Blacher\*\*, Steven Lopez, Johanna Shapiro, and Judith Fusco

*Contributions to depression in 148 Latina mothers with and 101 without children with mental retardation were investigated. Depressive symptomatology was assessed using the Center for Epidemiologic Studies—Depression scale (CES-D) (Radloff, 1977). Depression was elevated in both Latina samples relative to a normative group. Furthermore, Latina mothers who had children with mental retardation showed significantly higher levels of depressive symptomatology relative to controls. Depression was predicted by low family cohesion, poor health of the mother, absence of spouse or partner, less use of passive appraisal as a coping strategy, and presence of a child with mental retardation.*

Culture matters. Although this idea has become axiomatic for students of human behavior, most research on families and mental retardation has not, in fact, considered cultural influences at all. Our interest here is in how families are affected by, and cope with, mental retardation in the Hispanic or Latino culture of the American Southwest. Such attention to culture is long overdue, especially given the service needs of this rapidly growing minority group. Recent statistics indicate that in California, Latinos accounted for half of the state's total population growth (State of California, 1994).

Latino families and children with retardation have received little study (see, for example, Heller, Markwardt, Rowitz, & Farber, 1994; Mary, 1990; Shapiro & Tittle, 1990). The existing research has primarily focused on mothers. Many researchers, Latino and Anglo, have acknowledged the honored and revered role of women in Latin American society. As Tuck (1946) wrote in her ethnographic study of Descanso in Southern California: The beloved mother, "entitled to respect and homage, . . . may actually dominate in all matters that affect her children. Hers may be the deciding voice in every important decision" (p. 123). While it may be debatable whether Latina women share equal power and authority with Latino men, they have more often been the respondent in the studies reviewed here. In addition to this prominence of mothers is the increased likelihood of the physical absence of fathers in families where there is a child with mental retardation. In one recent study of Latina mothers of children with retardation, 40% were without a spouse or significant other (Blacher, Shapiro, Lopez, Diaz, & Fusco, 1997).

The present study focuses on Latina mothers' well-being, and how this is affected by having a child with mental retardation. The variable of interest is depression, as depression in adults is one of the nation's major health problems, with significant consequences for children. Lifetime population rates for major depressive disorder are set between 4 and 8% (Karno et al., 1987). If people are included who have major depressive symptoms but do not meet psychiatric diagnostic criteria, from 9 to 20% are estimated to be affected at any given time (Boyd & Weissman, 1981).

According to the American Psychiatric Association, Latinos comprise about 18% of those meeting the criteria for depression in the U.S. (Blazer, Kessler, McGonagle, & Swartz, 1994; Clary, 1995), a rate double the percentage of Latinos in the population. Factors that have been suggested to contribute to higher depression rates among Latinos are: stressors due to immigration, lack of societal integration, and under or unemployment (Root & Perez-Stable, 1987). Moreover, Latina women, in particular, are identified as being at heightened risk for physical and emotional

health problems such as depression (Salgado de Snyder, 1987; Salgado de Snyder, Cervantes, & Padilla, 1990). This population meets several other criteria for being at risk for depression including low socioeconomic status or being poor (Golding, 1990), having children, and being an ethnic minority (Golding, 1989).

The few studies regarding depression in Latinas who have children with disabilities have produced equivocal findings. Mary (1990), contrasting three ethnic groups with disabled children, described Latina mothers as less depressed and more accepting of the child than were Anglo or African American mothers. Shapiro and Tittle (1990) found that Hispanic mothers of children with orthopedic impairment were more depressed than mothers in a normative sample who did not have to deal with the stressor of child disability. Similarly, Blacher and her colleagues found that 49% of 148 Latina mothers of children with retardation scored at or above the clinical cut-off for depressive symptomatology (Blacher et al., 1997), in sharp contrast to 17% of normative families without retardation who scored above this cut-off (Radloff, 1977). None of these studies, however, contrasted Latina mothers with a child with retardation versus Latina mothers with a child without retardation, so the relationship of mental retardation to depression rates could not be determined.

We have drawn on the disability literature concerned with mothers' (primarily Anglo) experiences of depression to identify non-biological risk and protective factors. Variables of interest were grouped into five conceptual domains: demographics, acculturation, health, personal and coping resources, and family climate. *Demographic indicators* include mothers' age, education, employment status, and family income. Evidence regarding the buffering effect of socioeconomic status (SES) variables (e.g., education, income) is equivocal. While some studies suggested SES influences the level of perceived parental stress (Rabkin & Streuning, 1976; Wikler, 1981) or well-being (Seltzer & Krauss, 1989), other studies report either weak or nonsignificant relation-

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ships (Beckman, 1991; Donovan, 1988; Flynt & Wood, 1989; Haldy & Hanzlik, 1990). *Acculturation* is conceptualized as a multidimensional process (Rueschenberg & Buriel, 1989). Within this domain in the present study are the single variables of country of origin, percent of life in the U.S., and language preference, as well as a scores on an acculturation scale (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987).

*Health problems* are also a risk factor for depression, and these may be heightened both in Latinas and in women with a child with disabilities. While children of Latina women do not appear to be at serious disadvantage in terms of accessing health care, their mothers are significantly less likely to receive regular and preventive health care (Stein & Jessop, 1989). Moreover, studies also indicate that non-Latina mothers of children with disabilities report more physical symptoms, indicative of poorer health, than mothers of children without these difficulties (Goldberg, Morris, Simmons, Fowler, & Levinson, 1990; Hirst, 1985; Miller, Gordon, Daniele, & Diller, 1992; Wallander et al., 1989). Indeed, other studies of Hispanic populations have shown that the reporting of somatic symptoms, which are a proxy for overall health status, represents underlying depression (Garcia & Marks, 1989; Kolody, Vega, Meinhardt, & Benussen, 1986; Magni, Rossi, Rigatti-Luchini, & Mersky, 1992).

A variety of *personal and coping resources* have been identified as contributory to maternal well-being when there is a child with retardation. Of particular relevance to this sample may be coping styles. For example, a coping style characterized as passive may decrease risk of depression, with its focus on the inactive behaviors a mother might employ when she faces difficulties in the family. Passive coping may reflect a mother's lack of confidence in her ability to alter the outcome. A passive-appraiser might endorse an item on a coping scale suggesting, "If we wait long enough, the problem will go away." Related to this is the Hispanic value of *simpatia*—the need to promote smooth and pleasant relationships. People who have *simpatia* strive to achieve harmony in interpersonal relations and avoid interpersonal conflict; they are likely to "wait for a problem to go away," rather than to risk conflict addressing it. Finally, positive coping resources that are cognitive in orientation (e.g., positive appraisal, reframing, acceptance, planning) have been associated with increased maternal well-being (Affleck & Tennen, 1993; Frey, Greenberg, & Fewell, 1989; Glidden, 1989; Glidden, Kiphart, Willoughby, & Bush, 1993; Krauss & Seltzer, 1993).

The presence of spousal support has been related to decreased maternal stress (Beckman, 1984, 1991; Beckman & Pokorni, 1988; Brandt, 1984) and depression (Gowen, Johnson-Martin, Goldman, & Applebaum, 1989; Hanson & Hanline, 1990). In their study about shared care and marital satisfaction of parents of children with disabilities, Willoughby and Glidden (1995) found that greater father participation in child care was associated with greater marital satisfaction. Religious beliefs or religiosity, too, have been shown to have a positive relationship to maternal well-being and/or depression (Dulan & Blacher, 1995; Friedrich, Cohen, & Wiltturner, 1988; Rogers-Dulan & Blacher, 1995).

*Family climate* is often operationalized by variables such as cohesion, adaptability, and conflict. Not surprisingly, positive family relations (e.g., less conflict, more cohesion) are consistent predictors of decreased maternal stress (Krauss, 1993; Sloper, Knussen, Turner, & Cunningham, 1991) and depression

(Friedrich, Cohen, & Wiltturner, 1987; Rousey, Best, & Blacher, 1992). Of primary interest is whether the presence of a child with mental retardation *per se* has an impact on maternal well-being and depression (Shapiro, Blacher, & Lopez, in press).

This study was designed to explore the contributions to depression in Latina mothers with a child with mental retardation versus Latina mothers with a child without mental retardation. Two main questions were examined: (1) Is depression elevated in Latina mothers? and (2) Does having a child with mental retardation contribute to depression over and above other demographic, acculturation, personal and coping resource, health, and family climate variables? We were particularly concerned with the implications of findings for caregiving in Latino families across the lifecycle.

## Method

### Participants

The participants in the study were 249 Latina mothers, assessed in two separate samples: (1) a target group of 148 mothers who had a child with mental retardation (from age 3 to 19), and (2) a "control" group of 101 mothers whose child (from age 3 to 19) did not have mental retardation or any other diagnosed learning or behavior problem. Below, we describe the recruitment and characteristics of these samples in detail.

Selection criteria for the target group were that the respondent be the primary care provider of a child aged 3 to 19 years, who was identified as having moderate-to-severe retardation (American Psychiatric Association, 1994). Retardation classifications were all made by East Los Angeles Regional Center, 1 of 21 state agencies that served over 100,000 individuals with developmental disabilities in California. After agency personnel identified suitable target subjects, they mailed our recruitment packets to the families; those families interested in participation contacted us directly. We were not given access to the children's IQ scores. It should be noted that these state agencies endorsed our research and became an important recruitment source for Latinas who had children with mental retardation. In addition, the public schools encouraged families to register with regional centers. We, therefore, believe that our source of participants included the majority of potentially eligible Latino mothers who had children with retardation.

Recruitment challenges were far greater when we tried to obtain our control group. We originally recruited this control sample of Latina women by distributing flyers throughout East Los Angeles and by advertising in a popular Hispanic newspaper. However, at about this time a ballot initiative was approved in California known as Proposition 187 (Save Our State Initiative, 1994) that limited public schooling and other services to undocumented persons. Undocumented Latinos, or those in the process of procuring papers, were clearly inhibited from responding to a study funded by the government. While it was widely known that regional centers served individuals with disabilities regardless of legal or immigrant status, Latinas who did not have children with retardation were generally more cautious around state agencies. Thus, we utilized peer nomination as a recruitment strategy for our control group. Latina mothers who had children with retardation distributed study materials to appropriate friends and neighborhood acquaintances. These recruiting mothers received a \$5.00 "finders fee" for every family they referred who subse-

Table 1  
Variables of Interest for Target and Control Sample

	Target Sample (n = 148)		Control Sample (n = 101)	
	means/freq.	sd	means/freq.	sd
<b>Demographic Resources</b>				
Child's age	11.3	4.2	8.2****	4.5
Mother's age	40.6	9.7	36.5*	7.4
<b>Mother's Education</b>				
Grade 8 or less	44%		57%	
Grade 9-11	18%		19%	
High school/some college	34%		20%	
A.A. or higher	4%		4%	
<b>Family Occupational Index Score</b>				
Index Score	22.9	7.3	23.9	10.9
<b>Percent employed</b>				
Percent employed	23%		21%	
<b>Family Income</b>				
0 - 4,999	8.1%		7.9%	
5,000 - 9,999	18.9%		31.6%	
10,000 - 14,999	26.4%		27.7%	
15,000 - 19,999	20.3%		14.9%	
20,000 - 29,999	14.9%		13.9%	
30,000 - 39,999	3.4%		3.0%	
40,000 - 49,999	3.4%		1.0%	
50,000 - +	4.7%		—	
<b>Acculturation</b>				
Acculturation total	25.7	11.5	19.7****	5.2
Media	7.9	4.2	6.5**	2.9
Language use	9.5	6.2	6.2****	1.9
<b>Mother's Birthplace</b>				
Mexico	66.8%		89.4%	
California	18.3%		4.9%	
Central America	11.5%		3.9%	
South America	—		0.9%	
Other USA	3.4%		0.9%	
<b>Child's Birthplace</b>				
Mexico	21.6%		17.9%	
California	70.9%		81.2%	
Central America	5.4%		0.9%	
South America	—		—	
Other USA	2.1%		—	
<b>Percent of life in USA</b>				
(mother)	39		50***	
(child)	88		90	
<b>Health</b>				
Mother's Health Status	4.5	2.3	4.5	2.9
Child's Health Status	2.6	0.8	3.1****	0.7
<b>Personal Resources</b>				
Religious Connectedness	16.9	7.9	17.2	6.1
Acquiring Social Support	24.8	8.4	22.1**	7.5
Seeking Spiritual Support	14.5	3.5	13.6	3.7
Passive Appraisal	13.3	3.8	14.6**	3.7
Reframing	31.2	5.2	30.3	5.6
<b>Percent with spouse or partner</b>				
Percent with spouse or partner	59%		67%	
<b>Family Climate</b>				
Cohesion	6.9	1.9	7.4*	1.5
Conflict	2.2	1.9	2.1	1.9

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . \*\*\*\* $p < .0001$ .

quently participated in the study. Mothers were only included in the study after it was determined that they had a child between the ages of 3 and 19, and that the child had no known disability. Study interviewers had a prescribed set of questions to ask the referred mothers to determine whether the target child (or any other child in the family) had ever been referred for special education or had ever received services to accommodate a disability of any kind. Furthermore, mothers were asked whether they had any concerns about their child's behavior or development, or whether they had "heard of" an IEP (Individualized Education Program), regional centers, or child study teams, and if so, in what context. Thus, we were confident that the mothers who subsequently became part of the control group for this study were unlikely to have children with any known disability.

Table 1 summarizes relevant demographics for both target and control groups. Interviews for the target sample were conducted primarily with mothers, although three grandmothers who were primary care providers were included; we, however, use the generic term "mothers." All mothers spoke Spanish which was the primary language for 75% of them. The mother's primary country of origin was Mexico. Seventy-seven percent had only Latinos or mostly Latinos for close friends. Although 70% reported themselves to be Catholic, only 53% of these belonged to a church, and 78 described themselves as either religious or strongly religious.

This sample had low socioeconomic status. Thirty-eight percent of the mothers were single parents. The annual family income was under \$20,000 for 74% of the sample. Sixty-two percent of target Latinas did not complete high school, and 44% had no more than an eighth grade education. Average occupational index scores (Stevens & Cho, 1985) indicate that most mothers had working class jobs such as domestic or housekeeper. The mean age of the mothers was 40.6 years; the mean age of the children was 11.3 years. All target parents completed the Vineland Adaptive Behavior Scales (Sparrow, Balla, & Cicchetti, 1984), which rates the child's adaptive and maladaptive behavior. The mean adaptive behavior composite score for this sample was 31.9, with a range from 20 to 88. Fifty percent of the children had adaptive behavior total scores of 26 or less.

Table 1 also contains summary demographics for the control sample, which are reflective of census data (U. S. Census, 1991) on Hispanics or Latinos in the U.S. The majority of the control sample named Mexico as their country of origin, and all resided in urban areas of California. Ninety-two percent had only Latinos or mostly Latinos for close friends. Twenty percent of the families in this group were female-headed (as compared to 21.5% in a general sample of Hispanics [Marin & Marin, 1991]), and the majority spoke Spanish at home. Seventy-four percent reported their religious denomination as Catholic, but only 53% called themselves religious or strongly religious.

The control sample also had low socioeconomic status. As noted, 21% of the mothers were single parents. The annual income was under \$20,000 for 82% of the sample and most had blue-collar jobs. Seventy-six percent of these women did not complete high school, and 57% had only an eighth grade education or less. The mean age of the mothers was 36.5 years; the mean age of the children was 8.2 years.

## Measures

A battery of standardized instruments, questionnaires, and open-ended questions was administered. All instruments were either available in Spanish or translated, backtranslated, and pilot-tested prior to use (Marin & Marin, 1991). The variables of interest were derived from instruments reflecting five conceptual domains: Demographics, Acculturation, Health, Personal and Coping Resources, and Family Climate. Depressive symptomatology was our main outcome variable of interest.

Depression was assessed by the Center for Epidemiologic Studies Depression Scale, or CES-D (Radloff, 1977). The CES-D is a 20-item self-report scale designed to measure depressive symptoms of mood, feelings, and perceptions in the general population. The CES-D is a valid and reliable screening instrument frequently used in cross-cultural research (Garcia & Marks, 1989; Golding & Aneshensel, 1989; Roberts, 1980; Vega,

Kolody, Valle, & Hough, 1986.) The scoring range is from 0 to 60, with higher scores indicating greater symptomatology. The cut-off score typically used for depression is 16. In this study, the alpha for the total CES-D was .91. This instrument was already available in a Spanish version.

*Demographic Resources* included mothers' age, education, income and employment status. These were obtained via the Family Data Sheet, a questionnaire that includes variables such as child age, mother age, mother level of education, income, employment status, marital status, country of origin, and language of the interview. For analysis, level of education and income were coded on 9-point and 8-point ordinal scales, respectively. Employment status was dichotomized (i.e., employed full or part-time vs. unemployed or housewife).

*Acculturation* was assessed by a 12-item Acculturation Scale (Marin et al., 1987) with three subscales: Media (use of and preference for language-specific electronic and print media); Ethnic Social Relations (ethnicity of friends for self and one's children); and Language Use (current language use, language use as a child, preference for language, etc.). Higher scores on each subscale indicate more acculturation. Marin et al. (1987) reported an alpha coefficient of .92; their sample was primarily Mexican-American and Central American in origin. In the current study the instrument alpha was .91. Birthplace (for mother and child) and the percent of time living in the United States (for mother and child) were also included in the acculturation domain.

*Health status* of mother was assessed by a composite score made up of three interrelated items: whether currently sick (scored 0 = no, 1 = yes); days home sick in bed during the past year (0 = no days, 1 = 1 day, 2 = 2 to 3 days, 3 = 4 to 5 days, 4 = 5 to 7 days, 5 = 8 + days); and a self health rating from (1 = *excellent* to 4 = *poor*). The latter item has been used by Seltzer and Krauss (1989) as a single item estimate of mothers' health; the criterion-related validity of this item with a physical examination is reported to be .70 (Multidimensional Functional Assessment Manual, 1978). Child health was simply a rating by the mother (from 1 = *excellent* to 4 = *poor*). Health ratings were reverse-coded for analysis, so that higher scores represented better health.

*Personal and Coping Resources* included religious connectedness in the family, marital status (or presence of a partner), and coping strategies. Religious connectedness was assessed by 6 items from an instrument that assesses forms of religious expressiveness (e.g., How religious would you call yourself? Are you a member of a church or synagogue? How often do you attend services? How often do you attend activities at your church? Do your religious beliefs shape how you feel or act? How often do you pray?) This instrument is appropriate for persons from diverse social settings, including urban minority persons (Rogers-Dulan, in press). The alpha for these six items for the combined sample was .75.

Coping strategies were assessed by the five subscales of the Family Crisis Oriented Personal Evaluation Scales or F-COPES (McCubbin, Olson, & Larsen, 1991). The five subscales are: Acquiring Social Support (the family's ability to engage in seeking support from friends, relatives, neighbors); Seeking Spiritual Support (the family's ability to acquire spiritual support, primarily through organized religion); Mobilization of Resources (the family's ability to seek out community resources and accept help from others); Reframing (the capability to redefine stressful events in order to make them more manageable); and Passive

Appraisal (the family's ability to minimize reactivity in accepting problematic issues). Overall alpha reliability for the F-COPES is .86; alpha reliabilities for the five subscales range from .63 to .83 (McCubbin et al., 1991). In the current study, alphas ranged from .64 to .85, with an overall alpha of .84.

The presence or absence of a spouse or partner was considered a personal resource; this was coded dichotomously (1 = partner, 0 = no partner).

*Family Climate* variables included the presence or absence of a child with mental retardation (coded as 1 = present, 0 = not present), and aspects of the family social climate. The latter were assessed with the Family Environment Scale, FES (Moos & Moos, 1986), which has nine subscales of 10 items each, all scored true-false. In order to reduce the length of this interview protocol, only two subscales from this measure which were of the greatest theoretical interest to this study (Cohesion and Conflict) were administered. High scores on these subscales indicated more cohesion and greater conflict. This instrument was already available in Spanish.

### Procedures

Interviews were conducted at the subjects' homes, which were mainly located in the East Los Angeles area (a large urban Latino community in Southern California). Subjects were paid an honorarium of \$35 and were also invited to participate in a drawing for a prize of \$100.00. The interview lasted approximately 2 hours and was conducted in one or two visits. The interviewers were two Latina research assistants who were bilingual (Spanish and English). The research assistants were experienced parent interviewers who had training or a background in developmental disability. They understood that the general purpose of the study was to assess the experiences of Latina mothers raising a child with (or without) handicaps. Though many of the mothers spoke English, all control mothers and 75% of mothers of children with retardation preferred that the interview be conducted in Spanish.

### Results

The data from control families were examined and compared to the data from the sample of mothers who had a child with retardation. The comparison of the two samples shows similarities and differences between the groups; this provided a rationale for later combining the two samples for analysis. The two samples differed on several dimensions, indicated by an asterisk in Table 1. While these differences may be statistically significant, some are not likely to be clinically significant (e.g., Mom's age, occupational prestige score, or percent of life in the U.S.). For example, an occupational prestige score of 23 or 25 indicates a profession, such as childcare/housekeeper, which is a common childcare model in Los Angeles. Other significant differences in predictor variables are also indicated in Table 1. For example, mothers of children with retardation are, on average, four years older and have spent less of their lives in the United States than the mothers in our control sample. They also have children with slightly poorer health. On the other hand, they appear to be more acculturated than control mothers. In terms of personal and coping resources, however, mothers of children with retardation have slightly less cohesive families. They are also less likely to use passive appraisal and less likely to utilize social support as coping strategies.

Figure 1. Comparison of bar graphs of CES-D scores across three samples.

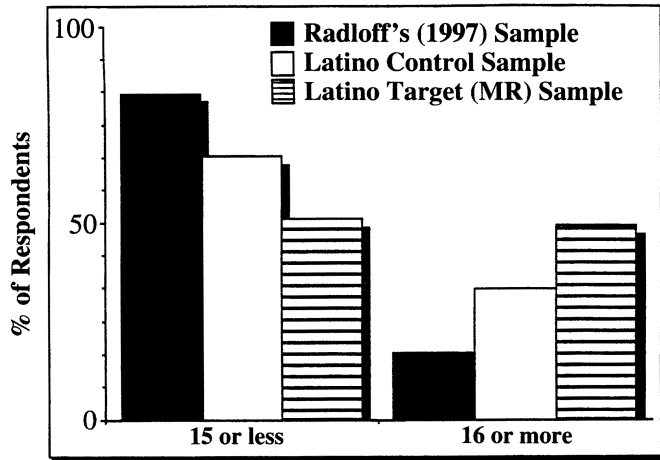
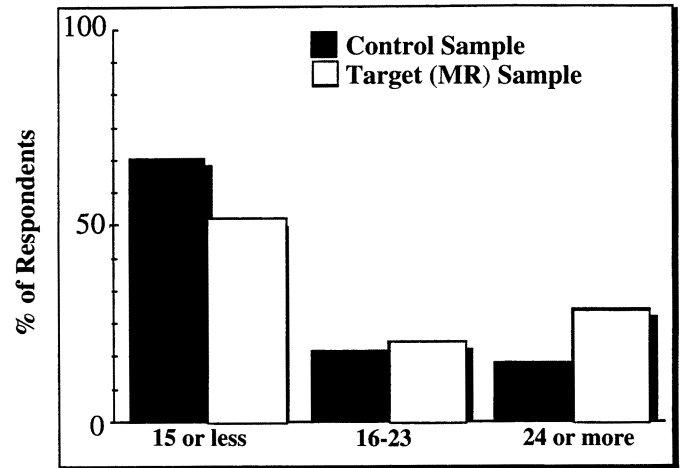


Figure 2. Comparison of CES-D scores in Latina mothers with and without children with retardation.



To explore the construct of acculturation further, we examined the variables of ancestry or country of origin and acculturation. Country of origin did not relate to depression; it also did not relate to acculturation level. Language preference also did not relate to country of origin, to depression, or to acculturation. Therefore, we followed the recommendation of Marin and Marin (1991), who note that similarity of variables of interest across ancestry allow researchers to report findings for all Hispanics without separating by acculturation or country of origin.

Is depression elevated in Latina mothers? Figure 1 contains a bar graph displaying distributions of depression scores for: (1) Radloff's (1977) original, primarily Anglo, sample; (2) our Latina control group; and (3) our Latina sample with children with mental retardation. Figure 1 indicates the percentage of respondents that scored in the clinical range (above 16, according to Radloff, 1977) and in the nonclinical range. It is apparent that there is an effect of ethnicity, with more Latino mothers scoring in the clinical range.

Against the backdrop of elevated depression in Latinas, we looked further at the role of mental retardation in the child. In Figure 2, we more closely examine the target and control samples of Latinas, using three cut-off points that represent levels of depressive symptomatology: none to low (CES-D score of less than 16), moderate (CES-D score 16-23), and very high (CES-D score of greater than 24). This follows the suggestion of some authors who use a higher CES-D cut-off score for Latinos (Magni et al., 1992; Vega et al., 1986) and allows for the comparison of groups with moderate to high levels of depressive symptomatology. The distributions shown in Figure 2 were significantly different (chi-square [ $N = 249$ ,  $df = 2$ ] = 7.63,  $p < .02$ ). Latina mothers who have children with retardation showed higher levels of depressive symptomatology than Latina mothers who do not have children with retardation; too, mothers of children with retardation were more likely to have depression levels in the very high risk range of 24 or above.

Table 2 indicates significant correlations for the combined sample between the CES-D depression score and variables in the domains of Demographic Resources, Acculturation, Health, Per-

sonal and Coping Resources, and Family Climate. Correlations with depression score did not approach significance for any demographic resource (child age, mother's age, education, income employment) or for any variable in the acculturation domain (mother's birthplace, percent of life in the U.S., language preference, acculturation). However, there were significant correlations between depression score and variables in the Health, Personal Resources, and Family Climate domains. Depressive symptomatology was significantly greater when the mother's, and to a more limited extent the child's, health was poor, when there was greater conflict in the home, and when there was a child with mental retardation. On the other hand, depressive symptomatology was significantly lower when there was higher family cohesion, the presence of a spouse or partner, and more endorsement of the use of the passive appraisal coping strategy.

The primary question of interest was whether having a child with mental retardation in the family puts the mother at a heightened risk for depression. As noted, the presence of a child with mental retardation correlated significantly with depression score, and mothers in the retardation group were more likely to score above the depression cut-off than mothers in the control group. However, as noted in Table 1, these groups differed on some other variables (e.g., passive appraisal, cohesion) that also related to depression and could confound the finding of different depression levels in the retardation and control groups. For further analyses, therefore, we combined the samples, and considered the presence or absence of mental retardation as one variable in regression analysis, to see if it accounted for significant variance in and of itself.

The seven variables that correlated significantly with depression (from the domains of Health, Personal and Coping Resources, and Family Climate) were entered into a hierarchical regression analysis to determine the best set of predictors of depression. The forward entry option was used, and the selection for entry into the model was set at .05 (SAS, 1989). The first step included six variables in Table 2 that were significantly related to depression: mother's health, child's health, passive appraisal, marital status, family cohesion, and family conflict. The final

Table 2  
Variables Significantly Related to CES-D Combined Sample (N = 249)

Demographic Resources	None
Acculturation	None
Health	
Mother's Health Status	-.36****
Child's Health	-.14*
Personal and Coping Resources	
Passive Appraisal	-.25****
Presence of partner or spouse, partner = 1, no partner = 0	-.24***
Family Climate	
Cohesion	-.41****
Conflict	.33****
Child with Mental Retardation, 1 = yes, 0 = no	.24***

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . \*\*\*\* $p < .0001$ .

variable, presence of a child with retardation, was then tested to determine if it entered significantly in a second step.

Table 3 shows the seven variables that were entered in two steps. The first set of six predictor variables accounted for nearly 33% of the variance in depression scores. Mother's health, family cohesion, marital status, and passive appraisal each accounted for significant variance. The dichotomous variable (presence of a child with retardation) also entered the model significantly ( $F(7,239) = 8.89, p < .01$ ). The retardation variable, however, only accounted for an additional 2.4% of variance in depression scores. This is a very conservative test of the influence of the retardation variable, however, as it is collinear with several of the variables already entered. In a stepwise regression analysis with the above seven variables, the retardation variable entered third, following mother's health and family cohesion.

Additional analyses were performed to see if the presence of a child with a disability interacted with any of the other variables. Using the centering technique as described by Aiken and West (1991), the interaction terms of all the variables originally included in the analysis were calculated. Separate regressions of the original model plus one interaction term at a time were calculated. None of the interaction terms reached or approached significance for entering the model.

The effects of the presence of a child with retardation were also examined in another way. To determine whether the same predictors emerged, regressions on depression using simultaneous entry were conducted separately for the target group and the control group. For the target group, the most significant predictor of depression was mother's health ( $t(145) = 4.11, p < .001$ ), followed by family cohesion ( $t(145) = -3.16, p < .01$ ) and marital status ( $t(145) = -2.60, p < .01$ ). For the control group, mother's health was again the most significant predictor ( $t(100) = 3.54, p < .001$ ), followed by passive appraisal ( $t(100) = -2.19, p < .05$ ).

## Discussion

The primary aims of this study were to determine the rate of depressive symptomatology in Latina mothers, and to determine whether depressive symptomatology is higher in mothers who have a child with mental retardation. CES-D data from our sample of 249 Latinas did indeed show rates of depressive symptomatology significantly above the normative group (Radloff, 1977). These findings were similar to those reported by Vega et al. (1986) in a sample of about 1800 Mexican-Americans, where 41.5% of the sample scored above the CES-D clinical cut-off of 16. Moreover, rates of depressive symptomatology for the moth-

Table 3  
Regression Model: CES-D Outcome for Combined Sample (N = 249)

Independent Variable	B	SE B	F	p
Step 1				
Cohesion of Family	-1.85	.47	15.55****	.0001
Mother's Health Status	-0.69	.87	28.24****	.0001
Child's Health Status	1.45	.27	.06	.4288
Marital Status	-4.39	1.44	9.26**	.0036
Passive Appraisal	-0.52	.18	7.74**	.0058
Conflict	0.79	.44	3.21	.0744
Step 2				
Cohesion of Family	-1.74	.46	13.98***	.0032
Mother's Health Status	1.48	.27	30.27****	
Child's Health Status	.09	.89	.01	
Marital Status	-4.18	1.42	8.66**	
Passive Appraisal	-.45	.18	6.01*	
Conflict	.86	.44	3.87	
Presence of child with retardation	4.41	1.48	8.89**	

Note.  $R^2 = .33$  for Step 1; Change in  $R^2 = .024$  for Step 2.  
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . \*\*\*\* $p < .0001$ .

ers of children with retardation were significantly higher than the rates for similar Latina mothers who did not have children with retardation or other disability. We note that generalization of these findings to Latinas who have children with retardation outside of Southern California awaits further study.

There are probably many explanations for the reported high overall depression rate. We note that poverty may be a strong predictor of mother's depression, but in the present sample there was little variance in SES. While most studies suggest that there is a main effect of SES on depression, we need further empirical evidence of whether SES also is a moderator (buffer) of depression in the presence of specific stressors such as mental retardation. Clearly this issue requires further examination in a sample with more variance in SES than the present study.

In determining the best set of predictors of depressive symptoms, the one variable associated with culture—acculturation—was significantly correlated with depression. Furthermore, the identified predictors of depressive symptoms (e.g., family cohesion, maternal health) are similar to those found in samples of Anglo mothers. One interpretation of the present results is that culture-specific factors may be less important than the previously established predictors of maternal depression. Another interpretation is that acculturation is only an indirect measure of culture (Betancourt & Lopez, 1993). The findings regarding family cohesion, however, are consistent with a cultural interpretation. Family cohesion is similar to the concept of familism (or "familismo"), a key value specific to Hispanics (Marin & Marin, 1991). Familism involves strong identification and attachment to nuclear and extended families. Some have found that this closeness with family members protects against physical and emotional stress in Hispanics by providing a natural support system (Cohen, 1979; Valle & Martinez, 1981). Latina mothers who do not receive help from other family members (perhaps related to the presence of child with retardation) may feel the additional burden of fending for themselves. This cultural context of abandonment may serve to heighten their distress (Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987). Allocentrism, or collectivism (Hofstede, 1980) is also an important cultural value of Hispanics, and might explain why many Hispanics prefer interpersonal relationships that are nurturing, loving, and respectful (Hofstede, 1980). Conflict within the family, of course, would be contrary to an allo-



centric view. A lack of family cohesion would indicate weak or absent identification with and attachment to family members. Thus, high family cohesion may reduce risk for depression.

Mother's health status emerges as the most robust correlate of depression, being the variable to enter first in separate regressions for the retardation and control samples, and the only variable to enter both. Mothers in better health reported less depressive symptomatology. However, there is no way to determine from our data whether mothers' poor health leads to depression, or whether more depressed mothers are more sensitive to their own somatic concerns. We acknowledge that culture may shape the manner in which psychological distress is expressed. For example, the distinction between physical and emotional health may be blurred among Latinos (see, for example, Guarnaccia, Angel, & Worobey, 1989).

While having a child with mental retardation is not the strongest predictor of depression, it does contribute significantly. Having a child with retardation has a direct relationship to depression. It may also have an indirect relationship to depression, as it impacts family cohesion, health, and even, marital status. Considering retardation status in tandem with family cohesion is theoretically interesting. Family members are part of an ethnic network that typically provides unique social support, known as "confidante" support to immigrant Latina women. This "confidante" support often replaces larger social networks that the mother may have had in her country of origin (Zuniga, 1992). A spouse or partner can substitute for or even serve as confidante. Some authors have suggested that without such support, immigrant Latinas are in jeopardy of depression or other adjustment problems (Vega, Kolody, & Valle, 1988; Zuniga, 1992). For Latinas who have children with retardation, confidante support may be especially difficult to find. Forty percent of these mothers had no spouse or partner, and many of those with spouses reported that they encountered rejection by their spouse due to the child with retardation.

Regional centers in California, however, indirectly provided some social support for these parents (through the provision of parent training, support groups, and social events). Thus, having a child with mental retardation may have diminished spousal support but increased contact with persons outside of the family, facilitating greater acculturation for these target mothers than for the control group mothers. Despite the efforts of regional centers to promote social interactions among retardation professionals and Latina mothers of children with retardation, distance and lack of transportation were barriers to regular contact and may have contributed to their feelings of isolation.

## Implications

Beyond further inquiry about the causes of this depression in Latina mothers, we need to be concerned about its long-term effects, particularly in families where there is a child with mental retardation. As these families age and their sons and daughters with retardation become adults, there will be consequences for the person with retardation of growing up with a mother who is depressed. Persons with mental retardation are at heightened risk for co-morbid mental disorders, with rates of mental illness in this population ranging as high as 20–35% (Nezu, Nezu, & Gill-Weiss, 1992). There has been little study of what puts the child at risk for *particular* mental disorders. However, we know from work with non-mentally retarded children that there is ample evi-

dence that maternal depression heightens the child's own risk for depression (Downey & Coyne, 1990; Hammen, 1991). Depression in the mother may not only put the child at risk for depression, but it may affect her parenting in ways that increase the child's risk of other behavior disorders, e.g., conduct problems (Gelfand & Teti, 1990). In addition, as a low-income sample, these mothers were already at risk for psychiatric disorder (American Psychiatric Association, 1994). It is easy to see a vicious cycle operating over time, whereby depression in mother results directly and indirectly in increased childhood behavior disorders, which in turn leads to further emotional distress in the mother.

Depression or other psychiatric disorders in addition to a child's mental retardation constitute dual-diagnosis, and we know that dually diagnosed children are among the most underserved and least understood of any group with disabilities (Campbell & Malone, 1991; Reiss, Levitan, & McNally, 1982). Dual diagnosis presents unique diagnostic and treatment problems and leaves children at particular risk for unfavorable long-term life outcomes. This, coupled with a lack of acculturation and already stressed mothers, will truly challenge our intervention and family support systems.

There are other issues that these Latino families will likely face across the lifespan. For example, it is critical to understand the role that Latino fathers or significant others play in childrearing, especially in families with a child with retardation. We need to know how these fathers cope with retardation, initially and over time, and how their support ultimately affects mothers and children. Of crucial importance to an understanding of the data presented here is whether perceived father support mitigates the reporting of depressive symptomatology in mothers.

Another issue to consider across the lifespan of these families pertains to the role of cultural context. Some suggest that maintaining aspects of one's traditional culture throughout the acculturation process actually protects against maternal outcomes such as depression (Zuniga, 1992). Yet Latinas who have children with mental retardation, particularly in Southern California, are confronted with philosophies and policies about disability that may conflict with their traditional values. For example, the zeitgeist of community integration (Halvorsen, Doering, Farron-Davis, Usilton, & Sailor, 1989; Kregel, Wehman, Seyfarth, & Marshall, 1986) and inclusion of persons with mental retardation (Stainback, Stainback, & Ayres, 1996) may well clash with the Latino value of *familismo*, or with strong family cohesion.

We know from both the literature and our experience with statewide agencies in California that Latino families tend to keep children with more severe retardation at home longer and to place with significantly less frequency than Anglo families (Blacher, Hanneman, & Rousey, 1992; Borthwick-Duffy, Eyman, & White, 1987; Meyers, Borthwick, & Eyman, 1985). However, we do not yet know if these families more successfully integrate the child into the family or resist placement based on cultural attitudes or financial needs without actually coping well. In addition, sibling support to parents may be crucial to long-term decision-making about out-of-home placement and to the well-being of mothers as they participate in caregiving across the lifespan (Blacher, 1993; Seltzer & Krauss, 1993; Seltzer, Krauss, & Gordon, 1996). There is much to be learned as we chart the impact of a child with retardation and lifelong caregiving decisions.

## Conclusion

Women of the recent immigrant Latino community, at least in the Los Angeles area, endure a number of adverse factors that put them at risk of depression. Of those who have depressive symptomatology in the risk or high risk range, there may be a lack of financial and technical resources to buffer depression, symptoms of poor health or somatic complaints, and perceived isolation and lack of family support. When such mothers also have a child with mental retardation, the risk increases (Kobe & Hammer, 1994; Smith, Innocenti, Boyce, & Smith, 1993). The remaining challenge for professionals is to provide those mothers with mental health services to reduce feelings of depression, or at the very least demoralization (Dohrenwend, Shrout, Egri, & Mendelsohn, 1980; Roberts, Vernon, & Rhoades, 1989), and to provide them with appropriate and effective educational services for the child with retardation.

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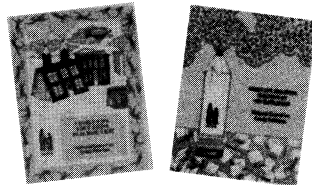
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