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# An examination of Anglo and Latino parenting practices: Relation to behavior problems in children with or without developmental delay



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## ABSTRACT

The transactional model of development has received empirical support in research on at-risk children. However, little is known about the role of ethnicity or child delay status (i.e., developmental delay [DD] or typical cognitive development [TD]) in the process of parents adapting to their child's behavior problems and special needs. We examined whether Latina ( $N = 44$ ) and Anglo ( $N = 147$ ) mothers of 3-year-old children with or without DD differed in their use of two parenting practices, maternal scaffolding and sensitivity. We also examined how the status and ethnic groups differed in child behavior problems at ages 3 and 5 and whether parenting predicted change in behavior problems over time in the ethnic and status groups. Analyses generally supported previous research on status group differences in behavior problems (DD higher) and parenting practices (TD higher). Parenting practices predicted a decrease in externalizing problems from child age 3 to 5 years among Latino families only. Child developmental status was not associated with change in behavior problems. Cultural perspectives on the transactional model of development and implications for intervention are discussed.

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## 1. Introduction

Parenting techniques and perceptions play a critical role in child development and are especially salient for children who have experienced early adversity or developmental compromise. The transactional model of development, which asserts that child characteristics and environmental factors reciprocally influence each other over the course of development, has received substantial empirical support in research on at-risk children (Pluess & Belsky, 2010; Sameroff & Chandler, 1975). In a study examining developmental status in preterm and full-term infants, the two groups displayed virtually identical social and cognitive skills by age 2 years; however, family factors, including maternal attitudes, accounted for 40–60% of the variance in such outcomes among preterm infants versus 15–30% in full-term infants (Greenberg & Crnic, 1988). Such research highlights the vital role of parenting for vulnerable children and suggests that parents must adapt to, and compensate for, an at-risk child's special needs. The present study of children with or without developmental delays examined the relation of parenting practices in Latino and Anglo (White, non-Hispanic) families to changes in child behavior problems.

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### 1.1. Parenting children with or without DD

Examining parenting practices is particularly important for vulnerable children who are at heightened risk for behavior problems and/or mental health disorders. In the present study, we focused on young children with developmental delay (DD) as a likely precursor to intellectual disability. It has been found that 2.5–4 times as many children with DD have serious emotional or behavior problems when compared to their typically developing (TD) peers (Baker, Neece, Fenning, Crnic, & Blacher, 2010; de Ruiter, Dekker, Verhulst, & Koot, 2007; Emerson, 2003; Emerson & Hatton, 2007; Koskentausta, Iivanaenen, & Almqvist, 2004). Studies have found, for example, that DD is associated with higher rates of depression (McGillivray & McCabe, 2007), the rate of ADHD among children with DD is over 3 times that of the general population (Baker et al., 2010), and autism spectrum disorder diagnoses are high among children with DD (Matson & Shoemaker, 2009). Furthermore, children with DD demonstrate difficulties with social adjustment as early as the preschool years and are generally less successful at developing and maintaining peer friendships (Solish, Perry, & Minnes, 2010). Given the disparity in the level of risk between children with DD and their TD peers, one may expect that environmental influences, such as parenting, may lead to differential outcomes as well.

Indeed, consistent with previous research examining the transactional model of development in vulnerable child populations, parenting practices have been shown to differ by child developmental status and to have different effects based on child status. The present study focused on two parenting practices, sensitivity and scaffolding, and their differential impact on children with or without DD. Sensitivity is defined here as the parent's attunement to her child's needs and goals and her resulting behavioral adjustment to take the child's needs and mood state into account (Belsky, Crnic, & Woodworth, 1995). Sensitivity among mothers of children with DD has been associated with such child benefits as improved social interaction (Mahoney & Perales, 2003), greater communication skills, and language gains (Hauser-Cram et al., 2001; Yoder & Warren, 2001). Maternal scaffolding, defined as the support and assistance that a mother provides to allow her child to succeed beyond what he would have been able to on his own (Baker, Fenning, Crnic, Baker, & Blacher, 2007), has also been shown to differentially impact children with or without DD. Baker et al. (2007) found that observed parental scaffolding at age 4 was a strong predictor of social skills at age 6 among children with DD but did not predict social skills among children with TD.

### 1.2. Latino and Anglo parenting

As many Western countries become increasingly diverse, the scientific community must approach this model of development from a culturally informed perspective. Though the Latino population in the United States accounts for 16% of all persons – and is growing at almost 9 times the rate of the Anglo American population (Humes, Jones, & Ramirez, 2011) – our understanding of parenting practices and the development of children with DD is based predominately on studies of Anglo families. Some researchers assert that Latino and Anglo parents generally impact their children through the same parental processes. The authors of a review of observational studies of parental sensitivity (Mesman, van IJzendoorn, & Bakermans-Kranenburg, 2012) found that though sensitivity was generally lower in ethnic minority families than in majority families, sensitivity had an equally positive impact on child development in minority families. Other research findings, however, have indicated that the processes by which parenting impacts child development differ by ethnicity. For instance, in a study of maternal control and infant attachment at 12 months, high physical control was associated with secure attachment in Puerto Rican mother–child dyads but with insecure-avoidant attachment for Anglo dyads (Carlson & Harwood, 2003). Given these findings, more research is needed to understand better the shared and distinct features of developmental trajectories in Latino and Anglo parent–child relationships, with a particular focus on children with DD.

### 1.3. Parenting differences by ethnic group and child delay status

An emerging body of research has combined investigations of ethnic group and child delay status differences. Relative to Anglo mothers of children with DD, Latina mothers of children with DD have reported viewing their children as less responsible for their behavior problems (Chavira, Lopez, Blacher, & Shapiro, 2000), and they have demonstrated more acceptance of their children's cognitive and practical limitations (Rueda, Monzo, Shapiro, Gomez, & Blacher, 2005). By contrast, Anglo mothers have been found to value and foster independence in children with DD more than Latina mothers do (Rueda et al., 2005). Additionally, Latina mothers have reported higher positive impact of their child with DD on the family in comparison to Anglo mothers (Blacher & Baker, 2007). Such research suggests that parents draw on cultural models of developmental delay (Rueda et al., 2005), which may lead them to adapt different approaches to parenting these at-risk children (Santiago & Wadsworth, 2010).

### 1.4. The present study

The present study addressed the following primary questions in a preschool-aged sample: (1) Do parenting styles (sensitivity and scaffolding in parent–child interactions) differ by child developmental status (TD, DD) and/or by mother ethnicity (Latino, Anglo)? (2) Do child behavior problems differ by child status and/or mother ethnicity? (3) Do parenting styles assessed at child age 3 predict change in child behavior problems over two years time, and does this relationship differ

by child status and/or mother ethnicity? Based on previously reported Latino/Anglo parenting differences and on previous research on parenting practices in children with delays reported above, we expected that mothers' use of sensitivity would differ by ethnicity and child developmental status, with Anglo mothers and mothers of TD children exhibiting higher levels. Though some previous research has explored scaffolding in Latino samples (e.g., Quiroz & Dixon, 2012) and in families of children with DD (e.g., Guralnick, Neville, Hammond, & Connor, 2008), there are no studies, to the best of our knowledge, that have investigated Latino/Anglo or TD/DD group differences in scaffolding. While we tentatively expected that scaffolding would follow a similar pattern to sensitivity (TD and Anglo higher), these analyses were exploratory.

We further expected to find higher levels of behavior problems among children with DD and children of Latino mothers, based on research indicating that children with DD (e.g., Baker et al., 2010) and ethnic minorities (e.g., Flink et al., 2012) are at a greater risk for behavior problems during the preschool years. Whether the relation of early parenting styles to changes in behavior problems over time would differ by child status and/or mother ethnicity was an open question, as there is limited research to guide hypotheses here. Thus, while we hypothesized that higher sensitivity and scaffolding would relate to decreased child behavior problems from ages 3 to 5 years for both ethnic and status groups (Gardner, Ward, Burton, & Wilson, 2003; Mesman et al., 2012), specific hypotheses are tentative.

## 2. Materials and methods

### 2.1. Participants

Participants were 191 families enrolled in the Collaborative Family Study (CFS), a longitudinal study of children and their families with samples drawn from Southern California (75%) and central Pennsylvania (25%). The CFS has been based at three universities: Penn State University, University of California, Los Angeles, and University of California, Riverside. The present sample included all families in which the mother was either Latina or Anglo (White, non-Hispanic) and for whom data were available on the primary measures at child ages 3 and 5. The larger study from which this sample was drawn recruited families at child age three years and enrolled children with typical cognitive development (TD) or with developmental delays (DD). We use the term "developmental delay" rather than the more formal diagnosis of "intellectual disability" for this sample of young children because classification would be less stable over time than with school-aged and older children and also because it was based upon IQ alone as opposed to IQ and adaptive behavior (APA, 2013).

Families of children with DD were recruited primarily through regional agencies that provide and purchase diagnostic and intervention services for individuals with developmental disabilities. In California, nearly all families with young children with DD register for services with one of a network of Regional Centers. Children in the DD group at intake were all in the moderate to borderline range of cognitive delay on the Bayley Scales of Infant Development-II (BSID-II; Bayley, 1993), ambulatory, and not diagnosed with autism. Families of TD children were recruited primarily through local preschools and daycare programs. Selection criteria for TD children were that the child score in the range of normal cognitive development and not have been born prematurely or have any developmental disability. In recruiting participants, school and agency personnel mailed brochures describing the study to families who met selection criteria, and interested parents contacted one of the research centers.

Based on the BSID-II (Bayley, 1993) at age 3 years, children were classified as DD (IQ at or below 75,  $n = 84$ ) or TD (IQ at or above 85,  $n = 107$ ). The BSID-II yields an IQ score with a normative mean of 100 and standard deviation of 15. Children who were classified as having borderline DD (IQ 76–84,  $n = 10$ ) were excluded from the present study.

Table 1 shows demographic characteristics at child age 3 by delay status (DD, TD) and maternal ethnicity (Anglo, Latino). In the combined sample, the average child age at intake was 35.0 months ( $SD = 2.8$ ), and there were more boys (58.7%) than girls. Because recruitment initially focused on intact families, 85.1% of participating parents were married (defined here as legally married or living together for at least six months). Mothers' age averaged 33.5 years ( $SD = 5.9$ ). The socioeconomic

**Table 1**  
Demographic characteristics by status (DD, TD) and ethnicity (Anglo, Latino).

	DD		TD		F status	F ethnicity
	Anglo	Latino	Anglo	Latino		
<b>Children</b>						
Mean age (SD)	35.5 (2.7)	35.6 (2.9)	34.6 (2.9)	35.4 (3.7)	1.10	0.80
IQ (SD)	58.4 (11.3)	58.0 (11.4)	106.1 (11.5)	101.1 (13.4)	491.35***	1.75
Sex (% boys)	70.2%	51.9%	51.1%	58.8%	0.49	0.37
<b>Parent and family</b>						
% Married	84.2%	70.4%	90%	88.2%	2.58	0.55
Mother's mean age (SD)	34.3 (6.5)	30.4 (5.5)	34.2 (5.7)	32.8 (4.2)	1.32	6.91**
Mother's highest grade (SD)	14.7 (2.5)	13.4 (1.4)	15.9 (2.4)	14.5 (2.5)	7.65**	11.37**
Annual income (% > \$50K)	49.1%	25.9%	58.4%	52.9%	5.41*	4.66*

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

\*\*\*  $p < 0.001$ .

status was generally high, with 49.2% of families having an annual income above \$50,000 and mothers' years of schooling averaged 15.0 years ( $SD = 2.5$ ). Demographics for the TD and DD status groups were similar, although the TD group had significantly higher family income ( $t = 3.26, p < 0.01$ ) and mothers' years of schooling ( $t = 4.62, p < 0.01$ ). Demographics for the Anglo and Latino ethnicity groups followed a similar pattern, with Anglo mothers having significantly more years of schooling and their families having higher income. Additionally, Anglo mothers were older than Latina mothers, a small but significant difference.

## 2.2. Procedures

All procedures were approved by the Institutional Review Boards of the three participating universities. Data were obtained through laboratory sessions and parent-completed questionnaires at child ages 3 and 5. Parents initially completed a telephone intake interview. Subsequently, two research assistants visited the family in the home at child age 3. After reviewing study procedures, answering questions, and obtaining parental informed consent, they administered the BSID-II (Bayley, 1993) to the child. During this testing, the child's mother completed the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001) and a demographic questionnaire, including information about the child's health and development. Observational measures of maternal sensitivity and scaffolding were obtained during a center-based parent-child interaction session held shortly after the home assessment. At child age 5, families returned to the center to complete the measure battery again.

The 3-year laboratory visit followed a structured protocol comprised of 3 problem-solving tasks, a clean-up task, and a free-play time. Task difficulty for the problem-solving segments was determined by a developmental assessment of the skill level needed to complete the task. Mothers were instructed to let their child try each task on his or her own and then provide whatever help they thought that the child needed to successfully complete the task. The easy task was designed to be easily completed by the child within a short amount of time, with little or no help from the mother; the medium-level task was designed to be challenging and was likely to be complex enough to warrant most children needing at least some assistance from their mothers; and the difficult task was designed to be sufficiently difficult so that it could not be solved by the child alone and always required the mother's assistance. The task materials for the easy- and medium-difficulty level problem-solving tasks were adjusted for the children based on cognitive status to keep the difficulty level consistent across groups. The difficult task was not varied, as it was sufficiently difficult that neither children with TD nor DD could accomplish the task without assistance.

## 2.3. Measures

### 2.3.1. Parenting measures

Parenting sensitivity and scaffolding were coded from the same observed mother-child interaction task in the laboratory by separate coding teams. Although the constructs are related, there is still separate variance to explain (see Table 2).

**2.3.1.1. Sensitivity: Parent-Child Interaction Rating Scale (Belsky et al., 1995).** Parent and dyadic behaviors were coded from videotapes of mother-child interaction at child age 3 during the free play, clean-up, and problem-solving tasks at the research center. Several mother and dyadic behaviors were observed, and each behavior was rated on a five-point Likert scale (1 = not at all characteristic, 5 = highly or predominantly characteristic) that considered both the frequency and intensity of the expressed affect or behavior. One of the dimensions of maternal behavior – sensitivity – was examined for the current study. Sensitivity reflected the mother's awareness of what the child was doing and the adjustment of her own behavior to take the child's needs, mood state, and behavior into consideration.

Coding was completed by pairs of trained coders who worked together to come to a consensus for each rating. Twenty percent of videotapes were also coded by an individual designated as the master coder in order to evaluate inter-rater reliability. Reliability was defined as a criterion of over 70% exact agreement with the primary coder and 95% agreement within one scale point. Training was continued until rates met or exceeded these criteria.

**2.3.1.2. Scaffolding: Maternal Scaffolding Coding System (Maslin-Cole & Spieler, 1990; see Hoffman, Crnic, & Baker, 2006, for further description of the modified coding scheme).** Maternal scaffolding was coded from the same videotapes of mother-child interaction at child age 3 years at the research center. Highly effective scaffolding involved a mother providing the optimal

**Table 2**  
Intercorrelations among parenting and child behavior problem variables.

	Sensitivity	CBCL INT at 3	CBCL INT at 5	CBCL EXT at 3	CBCL EXT at 5
Scaffolding	.54**	-.19*	-.19*	-.30**	-.26**
Sensitivity		-.15*	-.11	-.20**	-.13 <sup>†</sup>
CBCL INT at 3			.67**	.56**	.52**
CBCL INT at 5				.49**	.72**
CBCL EXT at 3					.72**

<sup>†</sup>  $p < 0.10$ .

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

level of support and assistance necessary to allow her child to succeed beyond what the child would have been able to achieve alone. Coders blind to study hypotheses rated three dimensions of scaffolding (technical, motivational, and emotional) for each of the three laboratory situations: free play, mother–child problem solving tasks, and clean up.

Technical scaffolding reflected the mother's ability to structure the task in such a way that it was within the child's abilities to successfully complete it with her support. Motivational scaffolding assessed the mother's ability to help the child initially become engaged with the task and her ability to maintain the child's focus on, and enthusiasm for, the task. Emotional scaffolding captured the mother's ability to make the task a positive experience for the child that would add to the child's sense of accomplishment and effectiveness (see Baker et al., for further description).

Each form of scaffolding was rated on a 5-point scale ranging from 1 (low quality scaffolding) to 5 (high quality scaffolding). For the present analyses, scores were summed over the tasks to increase measurement reliability and to provide a single score for each form of scaffolding. Technical, motivational, and emotional scaffolding were significantly related to each other ( $r_s = 0.58\text{--}0.80$ ;  $p < 0.01$ ). Thus, scores for the three types of scaffolding were converted to  $z$  scores and summed to create a scaffolding composite score. The overall interrater reliability of the Maternal Scaffolding Coding System was high (see Hoffman et al., 2006). This scoring has shown good criterion validity, as high maternal scaffolding scores have predicted higher subsequent social skills (Baker et al., 2007) and lower emotional dysregulation (Hoffman et al., 2006) for DD children.

### 2.3.2. *Child Behavior Checklist for ages 1½–5 (CBCL; Achenbach & Rescorla, 2001)*

The preschool version of the CBCL has 99 items that indicate child problems. The respondent indicates, for each item, whether it is “not true” (0), “somewhat or sometimes true” (1), or “very true or often true” (2), now or within the past 2 months. The CBCL yields a total problem score, broadband externalizing and internalizing scales, and seven narrowband scales. The present study utilized the two broadband scales. The CBCL yields  $T$  scores for the broadband scales, with the mean set at 50 and a standard deviation of 10. Alphas for mother scores at child age 3 were .90 for externalizing and .87 for internalizing. Previous research supports the validity of this form of the CBCL among Latinos (Gross et al., 2006).

## 2.4. *Data analysis*

The data were checked for outliers (beyond 3 SD from the mean) on sensitivity, scaffolding, and CBCL scores and there were none. The first analyses examined differences in parenting (scaffolding and sensitivity) by culture (Latino, Anglo) and developmental status (TD, DD) at age 3 years using ANOVA, covarying for demographic differences between groups as necessary. Regression analyses were then run to assess the impact of these parenting domains separately on broadband externalizing and internalizing behavior problems at age 5.

## 3. **Results**

### 3.1. *Demographic covariates*

We conducted stepwise regressions to examine associations between maternal age and education, family income and the parenting variables at 3 and the child behavior problem variables at 3 and 5. Demographic variables that entered into these models were included as covariates in subsequent analyses. Maternal education and family income were associated with several of the parent and child variables and were covaried where appropriate. Maternal age did not enter into any of the models and thus was not covaried.

### 3.2. *Group differences*

#### 3.2.1. *Group differences in parenting variables at age 3*

Table 3 shows initial (child age 3) differences in the two parenting variables (scaffolding and sensitivity) by child developmental status and mother ethnicity. These are shown without covarying SES variables and after covarying SES variables. While there were many significant differences before covarying SES variables, some of these were attributable to SES differences and did not hold after SES was covaried. When SES was covaried, maternal scaffolding and sensitivity scores both remained significantly higher in TD families than in DD families. However, neither parenting variable differed by ethnic group, nor were there any significant status by ethnicity interactions.

#### 3.2.2. *Group differences in CBCL behavior problems at ages 3 and 5*

Table 3 also shows mean  $T$  scores for externalizing and internalizing CBCL scores at child ages 3 and 5. Here, too, we examined status and ethnic group differences, first without covarying SES variables and then after covarying SES. Status group effects, after covarying SES variables, were significant for internalizing and externalizing scores at child ages 3 and 5, with  $DD > TD$  in each analysis. Ethnic group effects, after covarying SES variables, were less consistent. At child age 3, Latina mothers reported significantly higher internalizing scores. However, there was no difference at age 5 for internalizing problems, and while Latina mothers also reported higher externalizing problems at child 3, this was only a trend, and there was no difference by age 5. No significant status by ethnicity interactions was found.

**Table 3**

Differences in parenting and child behavior problem variables, by status (DD, TD) and ethnicity (Anglo, Latino).

	DD means (SD)		TD means (SD)		F status	F ethnicity	F status: SES covaried	F ethnicity: SES covaried
	Anglo	Latino	Anglo	Latino				
Scaffolding	3.27 (0.70)	3.19 (0.76)	3.69 (0.62)	3.77 (0.74)	17.16 <sup>***</sup>	0.01	13.18 <sup>***</sup>	0.34
Sensitivity	3.15 (0.87)	2.79 (0.57)	3.56 (0.62)	3.33 (0.79)	14.30 <sup>***</sup>	5.48 <sup>*</sup>	8.52 <sup>**</sup>	2.01
CBCL INT at 3 years	53.3 (10.3)	59.2 (10.8)	47.1 (10.0)	54.2 (10.5)	9.56 <sup>**</sup>	12.88 <sup>***</sup>	6.84 <sup>*</sup>	8.84 <sup>**</sup>
CBCL INT at 5 years	53.9 (10.0)	55.6 (11.6)	47.7 (10.4)	50.3 (9.6)	9.08 <sup>**</sup>	1.25	7.85 <sup>**</sup>	0.87
CBCL EXT at 3 years	55.1 (9.8)	57.2 (11.5)	49.2 (9.5)	54.8 (12.3)	5.35 <sup>*</sup>	4.51 <sup>*</sup>	4.19 <sup>*</sup>	3.20 <sup>†</sup>
CBCL EXT at 5 years	53.6 (12.9)	54.3 (12.9)	46.4 (11.6)	51.1 (11.6)	5.36 <sup>*</sup>	1.46	–	–

Note: SES covariates in each analysis were those that entered into the regression. Scaffolding, maternal education; sensitivity, maternal education and family income; internalizing and externalizing at 3, maternal education; internalizing at 5, family income; externalizing at 5, none. The status  $\times$  ethnicity interactions were not significant and were thus excluded from the table.

<sup>†</sup>  $p < 0.10$ .

<sup>\*</sup>  $p < 0.05$ .

<sup>\*\*</sup>  $p < 0.01$ .

<sup>\*\*\*</sup>  $p < 0.001$ .

### 3.3. Correlations among the parenting and problem behavior variables

Table 2 shows correlations among these variables. There was high stability from age 3 to age 5 in child externalizing ( $r = .72$ ) and internalizing ( $r = .67$ ) scores. We should note that while these two behavior problem domains are conceptually different, there was high overlap in scores at age 3 ( $r = .56$ ) and age 5 ( $r = .72$ ). The parenting variable “scaffolding” related modestly but significantly to the CBCL domains at each age ( $r$ 's from  $-.19$  to  $-.29$ ); mothers' greater use of scaffolding was related to lower child behavior problem scores. The parenting variable “sensitivity,” on the other hand, only related significantly to child internalizing and externalizing behaviors at age 3, where higher sensitivity was associated with lower behavior problem scores.

### 3.4. Changes in child behavior problems by status and ethnicity

We conducted four linear regression analyses to examine changes in child externalizing and internalizing behavior problems from age 3 to 5 years. We ran separate regressions with age 5 externalizing or internalizing scores as the dependent variable, and within these for scaffolding or sensitivity as independent variables. The first independent variable in each case was the age 3 score on that CBCL broadband domain. The demographic covariate, if there was one, was entered next, followed by the child status and maternal ethnicity variables, and the sensitivity or scaffolding score.

**Table 4a**

Regression examining change in CBCL externalizing problems from 3 to 5 years: scaffolding.

	Unstandardized B (SE)	Standardized $\beta$
EXT at 3	0.78 (0.1)	0.67 <sup>**</sup>
Delay status	0.29 (8.2)	0.01
Ethnicity	24.16 (11.2)	0.83 <sup>*</sup>
Scaffolding at 3	3.93 (4.0)	0.22
Scaffolding $\times$ status	1.52 (2.1)	0.21
Status $\times$ ethnicity	-3.31 (3.5)	-0.27
Scaffolding $\times$ ethnicity	-5.42 (2.2)	-0.76 <sup>*</sup>

<sup>\*</sup>  $p < 0.05$ .

<sup>\*\*</sup>  $p < 0.001$ .

**Table 4b**

Regression examining change in CBCL externalizing problems from 3 to 5 years: sensitivity.

	Unstandardized B (SE)	Standardized $\beta$
EXT at 3	0.81 (0.1)	0.70 <sup>***</sup>
Delay status	-2.26 (8.2)	-0.09
Ethnicity	25.20 (10.5)	0.85 <sup>*</sup>
Sensitivity at 3	4.68 (4.3)	0.28
Sensitivity $\times$ status	2.52 (1.9)	0.34
Status $\times$ ethnicity	-3.11 (3.5)	-0.25
Sensitivity $\times$ ethnicity	-6.50 (2.3)	-0.76 <sup>**</sup>

<sup>\*</sup>  $p < 0.05$ .

<sup>\*\*</sup>  $p < 0.01$ .

<sup>\*\*\*</sup>  $p < 0.001$ .

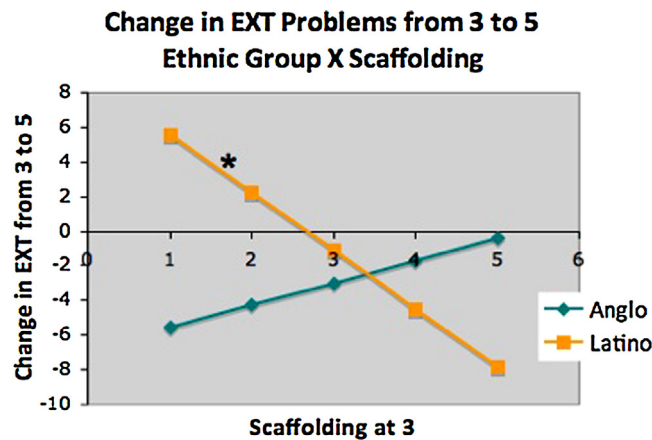


Fig. 1. Change in EXT problems from 3 to 5 – ethnicity  $\times$  scaffolding.

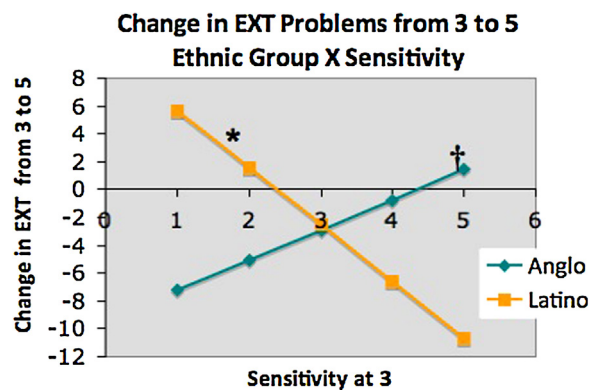


Fig. 2. Change in EXT problems from 3 to 5 – ethnicity  $\times$  sensitivity.

Tables 4a and 4b show the final models of two regressions on child externalizing behavior problems, with scaffolding (Table 4a) and sensitivity (Table 4b) as predictors. Results were similar in the two analyses. The age 3 externalizing CBCL score was a strong predictor; accounting for the variance attributed to the pre score allowed us to determine if other variables accounted for change (Rausch, Maxwell, & Kelley, 2003). Delay status and interactions with status were not significant in either analysis, nor were the parenting variables (sensitivity, scaffolding). Mother's ethnicity entered significantly in both, with Latina mothers reporting more decrease in externalizing scores.

Moreover, the ethnicity  $\times$  parenting variable interaction was significant in each regression; higher levels of scaffolding and sensitivity measured at child age 3 were each associated with a decrease in externalizing behavior problems by age 5 in Latino families but not in Anglo families. Fig. 1 shows this relationship for scaffolding, where higher scaffolding was associated with a significant decrease in externalizing problems among Latinos ( $\beta = -0.38, p = 0.004$ ) but not among Anglos ( $\beta = 0.05, ns$ ). Fig. 2 shows a similar interaction with sensitivity, where higher sensitivity was associated with a significant decrease in externalizing problems among Latinos ( $\beta = -0.29, p = 0.013$ ), but had a marginally significant increase in externalizing problems among children of Anglo mothers ( $\beta = 0.13, p = 0.05$ ).

Two regressions were run following the same procedures to assess change in internalizing behavior problems from child ages 3 to 5 years. The age 3 internalizing score was a strong predictor:  $\beta = 0.62, p < 0.001$  in both regressions. However, no other variable or interaction accounted for significant variance in internalizing problem change from age 3 to 5.

#### 4. Discussion

This study examined the role of child delay status and parent ethnic group membership in parenting practices and their impact on child outcomes, with a focus on problem behaviors. Specifically, we sought to identify ethnic and status group differences in observed mothers' scaffolding and sensitivity as well as in child externalizing and internalizing problems over time. We also investigated whether these parenting practices led to similar behavioral outcomes among young children with or without DD. We examine our findings with the goal of adding a cultural perspective to understanding the role of parenting in the development of at-risk children, which in turn serve as guidance for culturally relevant empirical interventions.



The first research question explored whether parenting sensitivity and/or scaffolding would differ according to ethnicity and status group. Mothers of TD children exhibited higher sensitivity and scaffolding scores even after covarying for SES, suggesting that status group differences are present and are not attributable to SES. Given the socioemotional risk associated with DD and the critical importance of the parent–child relationship (Eisenhower, Baker, & Blacher, 2007; Sameroff & Chandler, 1975), this disparity in parenting practices may be an important target for early intervention.

Further, in accordance with previous findings on ethnic differences in observed sensitivity (Mesman et al., 2012), Anglo mothers exhibited higher sensitivity than Latino mothers at child age 3. When ethnic group demographic differences were covaried, however, this association was no longer significant, lending support to previous research indicating that ethnic differences in sensitive parenting are primarily a result of family stress due to socioeconomic disadvantage (Gonzales et al., 2011; Mesman et al., 2012). The lack of ethnic differences in scaffolding, even without covarying demographic differences, should be investigated further, as this is the first study, to the best of our knowledge, examining ethnic group differences in scaffolding.

The second question was whether internalizing and externalizing behavior problems would be higher among children with DD and among Latino children. Consistent with previous research, mothers of children with delay did report higher internalizing and externalizing scores across both ages, an effect that persisted when SES was covaried. Latina mothers reported higher internalizing and externalizing problems than Anglo mothers at age 3, though the ethnic difference in externalizing at age 3 was reduced to marginal significance with the inclusion of SES covariates. The role of SES in ethnic differences in behavior problems supports previous findings that SES factors account for the association between ethnic minority status and child behavior problems (Flink et al., 2012). These ethnic differences were no longer present at age 5. Latino children's reported externalizing behavior problems decreased across these preschool years while Anglo children's problems remained relatively constant.

The third research question addressed whether these parenting practices predicted change in behavior problems over time and whether this differed by status and ethnicity. There were no significant effects based on child delay status. The lack of interaction between the parenting variables and child status was somewhat surprising, given existing evidence of status differences in vulnerability to negative parental affect (Green & Baker, 2011). Additionally, findings that parents draw on cultural models of delay (Rueda et al., 2005), with Latina mothers reporting a higher positive impact of children with DD (Blacher & Baker, 2007), led us to expect ethnic differences in outcomes between the child status groups as well. One potential explanation for the absence of any status effects is our focus in these analyses on *change* in behavior problems. These broadband scores are relatively stable during early childhood. Furthermore, it should be noted that Green and Baker (2011) examined negative and positive affect during parent–child interactions, and Blacher and Baker (2007) reported on parent-expressed attitudes. By contrast, our study focused on observed parenting practices rather than the mood or beliefs associated with them. Future studies should investigate the shared and distinct aspects of observed parenting styles and self-reported parental attitudes and how these entities affect the development of children with and without delay over time.

Based on previous findings on associations between parenting and behavioral outcomes (Brotman et al., 2008; Gonzales et al., 2011; Mesman et al., 2012), we tentatively predicted that these parenting practices would function through the same processes in Latino and Anglo families, with higher sensitivity and scaffolding predicting a greater decrease in behavior problems. However, our findings suggest that sensitivity and scaffolding predict different trajectories for the two ethnic groups. While higher scaffolding and sensitivity predicted a significant decrease in externalizing problems in Latino families, scaffolding was not associated with change in externalizing problems with Anglos, and sensitivity predicted a marginally significant increase in externalizing problems in Anglos. These findings are discordant with previous research demonstrating the benefits of scaffolding (Gardner et al., 2003) and one finding that sensitivity decreases problem outcomes in both Anglos and Latinos (Mesman et al., 2012). We note that our procedure, an examination of how observed sensitivity impacts change in behavior problems, differs in many respects from that of the Mesman et al. (2012) study, a review of several studies investigating how sensitivity impacts an array of child outcomes (e.g., attachment style, language skills, behavior) in a range of ages from 4 to 60 months. Future research should continue to examine this association between parental sensitivity and child outcomes with a variety of samples and settings to clarify the fundamental connection between these two constructs.

The role of attitudinal familism may help to explain the present findings. This concept, considered to be one of the most important culture-specific values for Latinos (Moore, 1970), stresses the commitment of family members to the family and familial relationships above the individual (Luna et al., 1996). Incorporated into the predominant definition of attitudinal familism are the ideas that individual activities are completely integrated into the progression of the family's objectives and also that family members are willing to rally to the support of a member if threatened by outsiders (Burgess, Locke, & Thomes, 1971). Taken with the finding that Latina mothers have reported that they do not blame their children for their behavior problems (Chavira et al., 2000), our findings may lend support to the transactional model among Latino families. Latina mothers may conceptualize behavior problems as an assault on the family rather than the fault of the child, and they may thus assume more responsibility in correcting the child's behavior for the wellbeing of the family. Indeed, higher familism has been found to predict lower rates of problem behaviors in Latino children (Berkel et al., 2010; Germán, Gonzales, Bonds, Dumka, & Millsap, 2009). Familism may thus be a driving force behind a decrease in externalizing problems among Latino families through higher sensitivity and scaffolding. A recommendation for future studies of Latino parenting and child developmental delay would be to include a measure of attitudinal familism.

Several limitations of the present study should be noted. At the time of data collection, information about the immigration status or level of acculturation of our Latino sample was not gathered. Given that Latino immigrant children

have been found to exhibit fewer externalizing problems than their 2nd or 3rd generation Latino peers (Gonzales et al., 2008), immigrant status and acculturation could be important contributors to our findings. However, some research has suggested that acculturation does not relate to parenting practices or values in Latino families. For example, parenting and acculturation were not associated in a study of parenting in Latino families with children ages 2–6 years (Calzada & Eyberg, 2002), and perceived family support, an important aspect of familism, was also found to be unrelated to acculturation (Sabogal, Marín, Otero-Sabogal, Marín, & Perez-Stable, 1987). Furthermore, we do not know the country of origin of each Latino participant (though most were from Mexico). Research has indicated Latino subgroup differences in parenting practices (Calzada & Eyberg, 2002) and recommends caution in generalizing our findings to all Latino subgroups. However, research has also shown that certain values, including familism, are generally pervasive across Latino subgroups (Calzada, Fernandez, & Cortes, 2010; Sabogal et al., 1987).

The present study also has several strengths. The multi-method approach, with maternal report and observed parenting, increases the validity of our findings. The longitudinal design is an improvement upon cross-sectional analyses of ethnic differences (Smokowski, Rose, & Bacallao, 2008) and contributes to our understanding of the transactional model among Latino families. The focus was on strengths in Latino parenting practices, including use of parental control, that are often perceived as detrimental to child development. Identifying strengths, as opposed to focusing on weaknesses in Latino parenting, is particularly important since many Latino children face substantial obstacles during development, including discrimination (Berkel et al., 2010) and the stress of financial strain (Gonzales et al., 2008).

Future research could productively focus on expanding our understanding of the transactional model of development among families of children of different ability levels and cultural backgrounds as well as on developing culturally sensitive interventions. Regarding our empirical understanding of how parent and child factors interact with one another to predict certain outcomes, future studies could incorporate additional time points to better address causation and to explore how children respond to and, in turn, influence parenting. Future research also could address how parents can identify early risk for internalizing problems and which parenting practices most effectively reduce internalizing problems. With respect to early intervention programs, the relation of parental scaffolding and sensitivity to decreased child problem behaviors in Latino families suggests that greater focus on these teaching methods could be protective against maladaptive child development while remaining consistent with Latino family values.

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## References

- American Psychiatric Association. (2013). *Intellectual disability. Diagnostic and statistical manual of mental disorders* (5th ed., Rev.).
- Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA school-age forms & profiles: An integrated system of multinformant assessment*. Burlington: University of Vermont, Research Center for Children, Youth & Families.
- Baker, B. L., Neece, C. L., Fenning, R. M., Crnic, K. A., & Blacher, J. (2010). Mental disorders in five-year-old children with or without developmental delay: Focus on ADHD. *Journal of Clinical Child & Adolescent Psychology*, 39(4), 492–505.
- Baker, J. K., Fenning, R. M., Crnic, K. A., Baker, B. L., & Blacher, J. (2007). Prediction of social skills in 6-year-old children with and without developmental delays: Contributions of early regulation and maternal scaffolding. *American Journal on Mental Retardation*, 112(5), 375–391.
- Bayley, N. (1993). *Bayley scales of infant development: Manual* (2nd ed.). San Antonio, TX: Psychological Corporation.
- Berkel, C., Knight, G. P., Zeiders, K. H., Tein, J., Roosa, M. W., Gonzales, N. A., et al. (2010). Discrimination and adjustment for Mexican American adolescents: A prospective examination of the benefits of culturally-related values. *Journal of Research on Adolescence*, 20(4), 893–915.
- Belsky, J., Crnic, K., & Woodworth, S. (1995). Personality and parenting: Exploring the mediating role of transient mood and daily hassles. *Journal of Personality*, 63(4), 905–929.
- Blacher, J., & Baker, B. L. (2007). Positive impact of intellectual disability on families. *American Journal on Mental Retardation*, 112(5), 330–348.
- Brotman, L. M., Gouley, K. K., Huang, K. Y., Rosenfelt, A., O'Neal, C., Klein, R. G., et al. (2008). Preventative intervention for preschoolers at high risk for antisocial behavior: Long-term effects on child physical aggression and parenting practices. *Journal of Clinical Child and Adolescent Psychology*, 37(2), 386–396.
- Burgess, E. W., Locke, H. J., & Thomes, M. M. (1971). *The family: From traditional to companionship* (4th ed.). New York: American Book Company.
- Calzada, E. J., & Eyberg, S. M. (2002). Self-reported parenting practices in Dominican and Puerto Rican mothers of young children. *Journal of Clinical Child and Adolescent Psychology*, 31(3), 354–363.
- Calzada, E. J., Fernandez, Y., & Cortes, D. E. (2010). Incorporating the cultural value of respeto into a framework of Latino parenting. *Cultural Diversity and Ethnic Minority Psychology*, 16(1), 77–86.
- Carlson, V. J., & Harwood, R. L. (2003). Attachment, culture, and the caregiving system: The cultural patterning of everyday experiences among Anglo and Puerto Rican mother–infant pairs. *Infant Mental Health Journal*, 24(1), 53–73.
- Chavira, V., Lopez, S. R., Blacher, J., & Shapiro, J. (2000). Latina mothers' attributions, emotions, and reactions to the problem behaviors of their children with developmental disabilities. *Journal of Child Psychology and Psychiatry*, 41(2), 245–252.
- deRuiter, K. P., Dekker, M. C., Verhulst, F. C., & Koot, H. M. (2007). Developmental course of psychopathology in youths with and without intellectual disabilities. *Journal of Child Psychology and Psychiatry*, 48, 498–507.
- Eisenhower, A. S., Baker, B. L., & Blacher, J. (2007). Early student–teacher relationships of children with and without intellectual disability: Contributions of behavioral, social, and self-regulatory competence. *Journal of School Psychology*, 45, 363–383.
- Emerson, E. (2003). Prevalence of psychiatric disorders in children and adolescents with and without intellectual disability. *Journal of Intellectual Disability Research*, 47, 51–58.
- Emerson, E., & Hatton, C. (2007). Mental health of children and adolescents with intellectual disabilities in Britain. *British Journal of Psychiatry*, 191, 493–499.

- Flink, I. J., Jansen, P. W., Beirens, T. M., Tiemeier, H., van Ijzendoorn, M. H., Jaddoe, V. W., et al. (2012). Differences in problem behaviour among ethnic minority and majority preschoolers in the Netherlands and the role of family functioning and parenting factors as mediators: The Generation R Study. *BMC Public Health*, *12*, 1092.
- Gardner, F., Ward, S., Burton, J., & Wilson, C. (2003). The role of mother–child joint play in the early development of children's conduct problems: A longitudinal observational study. *Social Development*, *12*, 361–378.
- Germán, M., Gonzales, N. A., Bonds, D., Dumka, L. E., & Millsap, R. (2009). Familism values as a protective factor for Mexican-origin adolescents exposed to deviant peers. *Journal of Early Adolescence*, *29*(1), 16–42.
- Gonzales, N. A., Germán, M., Kim, S. Y., George, P., Fabrett, F., Millsap, R., et al. (2008). Mexican American Adolescents' cultural orientation, externalizing behavior and academic engagement: The role of traditional cultural values. *American Journal of Community Psychology*, *41*(1/2), 151–164.
- Gonzales, N. A., Coxe, S., Roosa, M. W., White, R. M. B., Knight, G. P., Zeiders, K. H., et al. (2011). Economic hardship, neighborhood context, and parenting: Prospective effects on Mexican American adolescents' mental health. *American Journal of Community Psychology*, *47*(1/2), 98–113.
- Green, S. A., & Baker, B. L. (2011). Parent emotion expression as a predictor of child social competence: Children with or without intellectual disability. *Journal of Intellectual Disability Research*, *55*, 324–338.
- Greenberg, M. T., & Crnic, K. A. (1988). Longitudinal predictors of developmental status and social interaction in premature and full-term infants at age two. *Child Development*, *59*(3), 554–570.
- Gross, D., Fogg, L., Young, M., Ridge, A., Cowell, J. M., Richardson, R., et al. (2006). The equivalence of the Child Behavior Checklist/1 1/2–5 across parent race/ethnicity, income level, and language. *Psychological Assessment*, *18*(3), 313–323.
- Guralnick, M. J., Neville, B., Hammond, M. A., Connor, R. T., & Abbeduto, L. (2008). Mothers' social communicative adjustments to young children with mild developmental delays. *American Journal on Mental Retardation*, *113*(1), 1–18.
- Hauser-Cram, P., Warfield, M. E., Shonkoff, J. P., Krauss, M. W., Sayer, A., Upshur, C. C., et al. (2001). Children with disabilities: A longitudinal study of child development and parental well-being. *Monographs of the Society for Research in Child Development*, *66*(3), 1–131, (serial no. 266).
- Hoffman, C., Crnic, K. A., & Baker, J. K. (2006). Maternal depression and parenting: Implications for children's emergent emotion regulation and behavioral functioning. *Parenting: Science and Practice*, *6*, 271–295.
- Humes, K. R., Jones, N. A., & Ramirez, R. R. (2011). *Overview of race and Hispanic origin: 2010. 2010 census briefs*. Retrieved from [www.census.gov/prod/cen2010/briefs/c2010br-02.pdf](http://www.census.gov/prod/cen2010/briefs/c2010br-02.pdf).
- Koskentausta, T., Iivanainen, M., & Almqvist, F. (2004). CBCL in the assessment of psychopathology in Finnish children with intellectual disability. *Research in Developmental Disabilities*, *25*(4), 341–354.
- Luna, I., de Ardon, E. T., Lim, Y. M., Cromwell, S. L., Phillips, L. R., & Russell, C. K. (1996). The relevance of familism in cross-cultural studies of family caregiving. *Western Journal of Nursing Research*, *18*, 267–283.
- Mahoney, G., & Perales, F. (2003). Using relationship-focused intervention to enhance the social–emotional functioning of young children with autism spectrum disorders. *Topics in Early Childhood Special Education*, *23*, 77–89.
- Maslin-Cole, C., & Spieker, S. J. (1990). Attachment as a basis for independent motivation: A view from risk and non-risk samples. In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 245–272). Chicago: University of Chicago Press.
- Matson, J. L., & Shoemaker, M. (2009). Intellectual disability and its relationship to autism spectrum disorders. *Research in Developmental Disabilities*, *30*(6), 1107–1114.
- McGillivray, J. A., & McCabe, M. P. (2007). Early detection of depression and associated risk factors in adults with mild/moderate intellectual disability. *Research in Developmental Disabilities*, *28*, 59–70.
- Mesman, J., van Ijzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2012). Unequal in opportunity, equal in process: Parental sensitivity promotes positive child development in ethnic minority families. *Child Development Perspectives*, *6*(3), 239–250.
- Moore, J. W. (1970). *Mexican-American*. Englewood Cliffs, NJ: Prentice-Hall.
- Pluess, M., & Belsky, J. (2010). Differential susceptibility to parenting and quality child care. *Developmental Psychology*, *46*(2), 379–390.
- Quiroz, B., & Dixon, L. Q. (2012). Mother–child interactions during shared literacy activities: Education in a fractured bilingual environment. *Journal of Early Childhood Literacy*, *12*(2), 139–175.
- Rausch, J. R., Maxwell, S. E., & Kelley, K. (2003). Analytic methods for questions pertaining to a randomized pretest, posttest, follow-up design. *Journal of Clinical Child and Adolescent Psychology*, *32*(3), 467–486.
- Rueda, R., Monzo, L., Shapiro, J., Gomez, J., & Blacher, J. (2005). Cultural models of transition: Latina mothers of young adults with developmental disabilities. *Exceptional Children*, *71*(4), 401–414.
- Sabogal, F., Marín, G., Otero-Sabogal, R., Marín, B. V., & Perez-Stable, E. J. (1987). Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences*, *9*(4), 397–412.
- Sameroff, A. J., & Chandler, M. J. (1975). Reproductive risk and the continuum of caretaking casualty. *Review of Child Development Research*, *4*, 187–244.
- Santiago, C., & Wadsworth, M. (2010). Family and cultural influences on low-income Latino children's adjustment. *Journal of Clinical Child & Adolescent Psychology*, *40*(2), 332–337.
- Solish, A., Perry, A., & Minnes, P. (2010). Participation of children with and without disabilities in social, recreational and leisure activities. *Journal of Applied Research in Intellectual Disabilities*, *23*(3), 226–236.
- Smokowski, P. R., Rose, R., & Bacallao, M. L. (2008). Acculturation and Latino family processes: How cultural involvement, biculturalism, and acculturation gaps influence family dynamics. *Family Relations*, *57*, 295–308.
- Yoder, P., & Warren, S. F. (2001). Relative treatment effects of two prelinguistic communication interventions on language development in toddlers with developmental delays vary by maternal characteristics. *Journal of Speech, Language, and Hearing Research*, *44*, 224–237.